Form 3160-3
(August 2007)

FORM APPROVED
OMB NO. 1004-0137
Expires: July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: UTU-144867A

6. If Indian, Allottee or Tribe Name: Ute Tribe

7. If Unit or CA Agreement, Name and No.: 891008900A

8. Lease Name and Well No.: NBU 920-20D

1a. Type of Work: [X] DRILL [ ] REENTER

1b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [ ] Single Zone [X] Multiple Zone

2. Name of Operator: Kerr-McGee Oil & Gas Onshore, LP

9. API Well No.: 43-047-40540

3a. Address: PO Box 173779, Denver, CO 80217-3779

3b. Phone No. *(include area code)*: Raleen White 720-929-6666

10. Field and Pool, or Exploratory: Natural Buttes Field

4. Location of well *(Report location clearly and In accordance with any State requirements.*)* NAD 83
At surface: 646' FNL 686' FWL NW/4 NW/4 Lat. 40.02632 Long. -109.69785
At proposed prod. zone: 611175X 4431269Y 40.026211 -109.697131

11. Sec.,T.,R.,M.,or Blk.and Survey or Area: 20 T 9S R 20E S.L.B. & M.

14. Distance in miles and direction from the nearest town or post office*: Approximately 36 miles south of Vernal, Utah

12. County or Parish: Uintah

13. State: Utah

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
646'	40.00	Unit well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/ BIA Bond No. on file**
±1,000'	11,000'	WYB000291
21. Elevations (Show whether DF. RT, GR, etc.)	**22. Aproximate date work will start***	**23. Estimated duration**
4,810 ' GR KB	ASAP	10 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1 shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by existing bond on file(see item 20 above).
5. Operator certification.
6. Such other site specific information and/ or plans as may be required by the a authorized officer.

25. Signature	Name *(Printed/ Typed)*	Date
Raleen White	Raleen White	2-13-2009
Title: Sr Regulatory Analyst	E-mail: raleen.white@anadarko.com Phone: 720-929-6666	
Approved By *(Signature)*	Name *(Printed/ Typed)*: BRADLEY G. HILL	Date: 03-02-09
Title	Office: ENVIRONMENTAL MANAGER	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

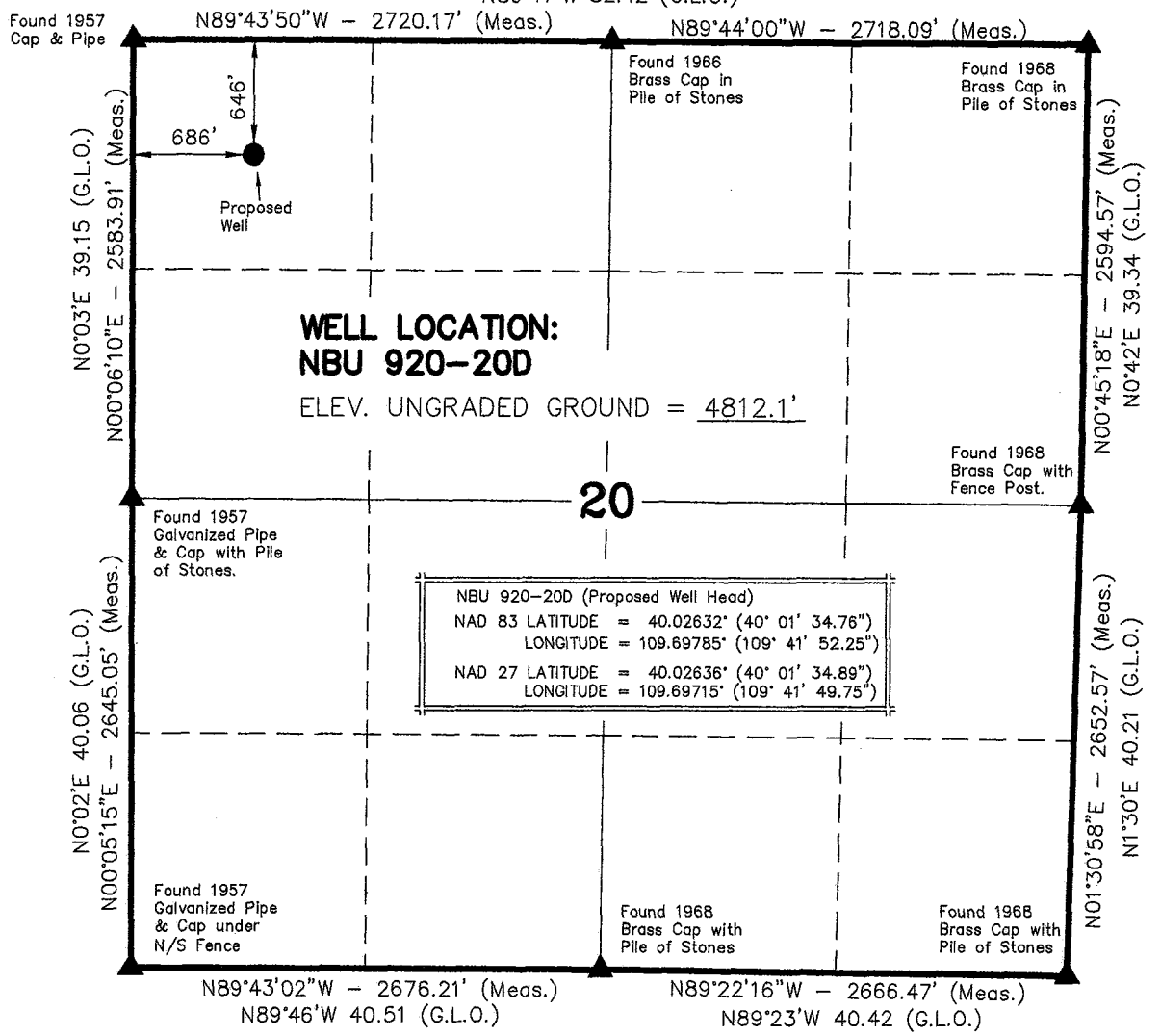
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

* *(Instructions on page 2)*

RECEIVED
FEB 17 2009
DIV. OF OIL, GAS & MINING

Federal Approval of this Action is Necessary

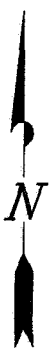
T9S, R20E, S.L.B.&M.

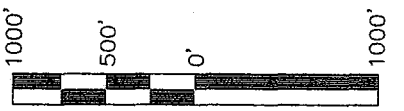


NOTES:

▲ = Section Corners Located

1. Well footages are measured at right angles to the Section Lines.
2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
3. Bearings are based on Global Positioning Satellite observations.
4. Basis of elevation is the Northwest Corner of Section 12, T9S, R20E, S.L.B.&M. The elevation of this Section Corner is shown on the Ouray SE 7.5 Min. Quadrangle as being 4676'.

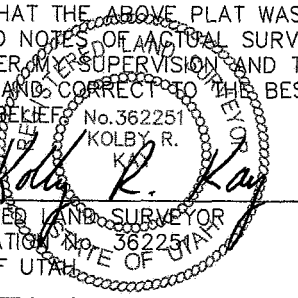




SCALE

SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



REGISTERED LAND SURVEYOR
REGISTRATION No. 362251
STATE OF UTAH

Kerr–McGee Oil & Gas Onshore, LP
1099 18th Street – Denver, Colorado 80202

NBU 920-20D
WELL PLAT
646' FNL, 686' FWL
NW ¼ NW ¼ OF SECTION 20, T9S, R20E,
S.L.B.&M. UINTAH COUNTY, UTAH.

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
38 WEST 100 NORTH – VERNAL, UTAH 84078

DATE SURVEYED: 11-04-08	SURVEYED BY: D.J.S.	SHEET 1 OF 9
DATE DRAWN: 11-10-08	DRAWN BY: E.M.S.	
SCALE: 1" = 1000'	Date Last Revised:	

NBU 920-20D
NWNW Sec. 20, T9S R20E
UINTAH COUNTY, UTAH
UTU-144867A

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. – 2. Estimated Tops of Important Geologic Markers:
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Formation	Depth	Resource
Uinta	0 – Surface	
Green River	1,814'	
Birds Nest	2,043'	Water
Mahogany	2,564'	Water
Wasatch	5,299'	Gas
Mesaverde	8,819'	Gas
MVU2	9,804'	Gas
MVL1	10,248'	Gas
TD	11,000'	

3. Pressure Control Equipment (Schematic Attached)

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

4. Proposed Casing & Cementing Program:

Please see the Natural Buttes Unit SOP. See attached drilling diagram.

5. Drilling Fluids Program:

Please see the Natural Buttes Unit SOP.

6. Evaluation Program:

Please see the Natural Buttes Unit SOP.

7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 11,000' TD, approximately equals 7,025 psi (calculated at 0.64 psi/foot).

Maximum anticipated surface pressure equals approximately 4,605 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. **Anticipated Starting Dates:**

Drilling is planned to commence immediately upon approval of this application.

9. **Variances:**

Please see Natural Buttes Unit SOP Onshore Order #2 – Air Drilling Variance
Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background
In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements
The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements
Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements
Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

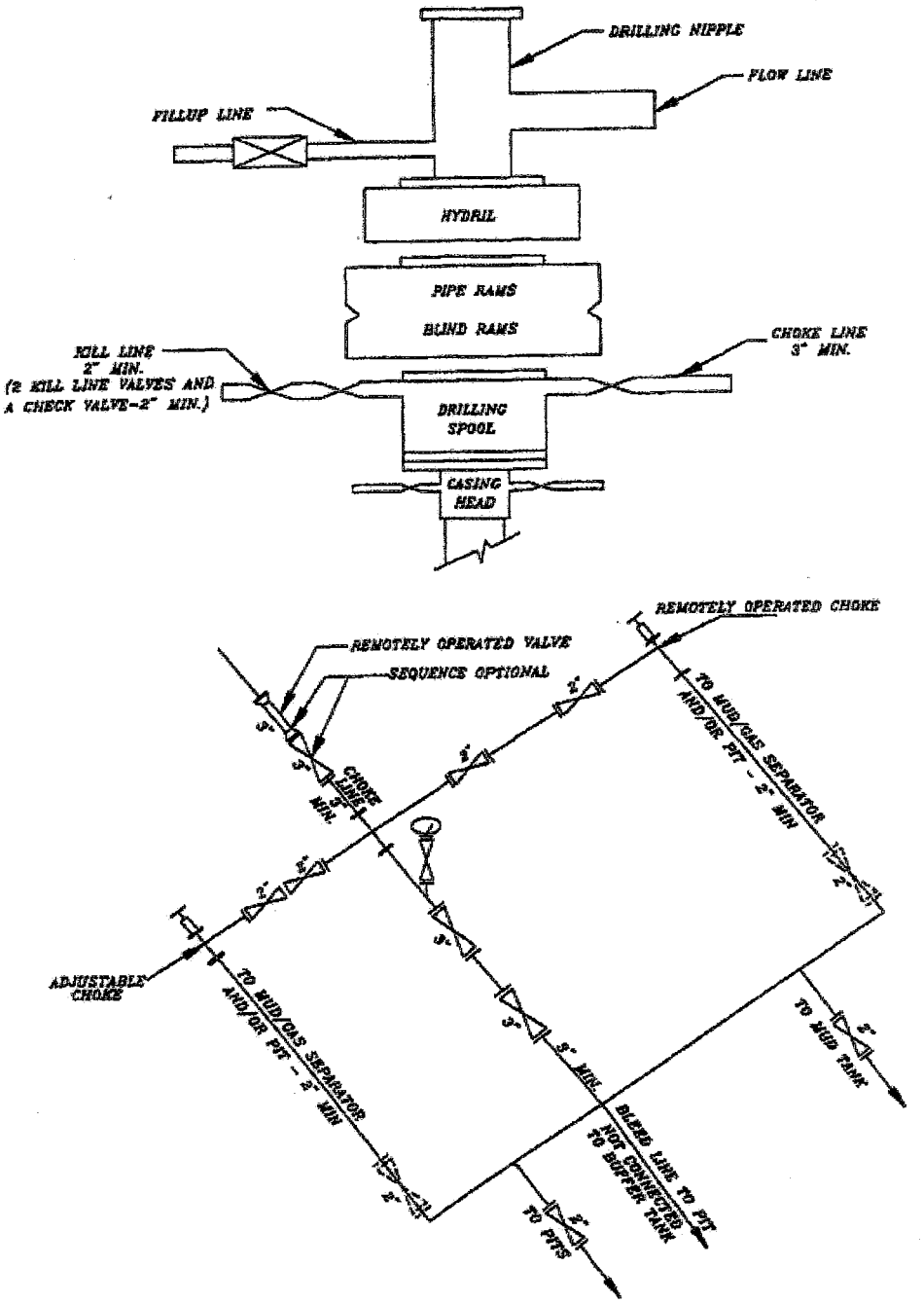
Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

Please see Natural Buttes Unit SOP.

EXHIBIT A
NBU 920-20D



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

NBU 920-20D
NWNW Sec. 20 T9S R20E
UINTAH COUNTY, UTAH
UTU-001567B

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN

1. **Existing Roads:**

Refer to the attached location directions.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

2. **Planned Access Roads:**

Approximately ±2,140' of new access road is proposed. Refer to Topo Map B.

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site.

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

3. **Location of Existing Wells Within a 1-Mile Radius:**

Please refer to Topo Map C.

4. **Location of Existing & Proposed Facilities:**

Please see the Natural Buttes Unit SOP.

Refer to Topo Map D for the location of the proposed pipelines.

Variances to Best Management Practices (BMPs) Requested:

This exception to the BMP should be granted by the BLM Authorized Officer because indurated bedrock, such as sandstone, is at or within 2 feet of the surface and the soil has a poor history for successful rehabilitation.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The requested color is Shadow gray (2.5Y 6/2), a non-reflective earthtone.

Interim Surface Reclamation Plan:

This exception is requested due to the current twin and multi-well program. If determined that this well will not be a candidate for either twinning &/or multi-well the operator shall spread the topsoil pile on the location up to the rig anchor points. The location will be reshaped to the original contour to the extent possible. The operator will reseed the area using the BLM recommended seed mixture and reclamation methods.

5. **Location and Type of Water Supply:**

Please see the Natural Buttes SOP.

6. **Source of Construction Materials:**

Please see the Natural Buttes SOP.

7. **Methods of Handling Waste Materials:**

Please see the Natural Buttes SOP.

A plastic reinforced liner is to be used as discussed during on-site inspection. It will be a minimum of 20 mil thick and felt, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites: RNI, Sec. 5, T9S, R22E, NBU #159, Sec. 35, T9S R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E, Pipeline Facility Sec. 36, T9S, R20E,Goat Pasture Evaporation Pond SW/4 Sec. 16, T10S, R22E, Bonanza Evaporation Pond Sec. 2, T10S, R23E *(Request is in lieu of filing Form 3160-5, after initial production).*

8. **Ancillary Facilities:**

Please see the Natural Buttes SOP.

9. **Well Site Layout:** (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

Location size may change prior to the drilling of the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling rig. The location will be re-surveyed and a form 3160-5 will be submitted.

10. **Plans for Reclamation of the Surface:**

Please see the Natural Buttes SOP.

Operator shall call the BIA for the seed mixture when the final reclamation occurs.

11. **Surface/Mineral Ownership:**

The well pad and access road are located on lands owned by:

Ute Indian Tribe
P.O. Box 70
Fort Duchesne, Utah 84026
(435) 722-5141

The mineral ownership is listed below:

United States of America
Bureau of Land Management
170 South 500 East
Vernal, UT 84078
(435)781-4400

12. **Stipulations/Notices/Mitigation:**

There are no stipulations or notices for this location.

13. **Other Information:**

A Class III archaeological survey has been performed and will be submitted upon receipt. The Paleo Report is attached.

14. **Lessee's or Operator's Representative & Certification:**

Raleen White
Sr. Regulatory Analyst
Kerr-McGee Oil & Gas Onshore LP
P.O. Box 173779
Denver, CO 80217-3779
(720) 929-6666

Tommy Thompson
Drilling Manager
Kerr-McGee Oil & Gas Onshore LP
P.O. Box 173779
Denver, CO 80217-3779
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under the terms and conditions of the lease for the operations conducted upon leased lands.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond # WYB000291

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Raleen White

Raleen White

2/4/2009

Date

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	February 4, 2009
WELL NAME	NBU 920-20D			TD	11,000' MD/TVD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
ELEVATION	4,810' GL	KB	4,825'		
SURFACE LOCATION	NW/4 NW/4 646' FNL	686' FWL	Sec 20	T 9S	R 20E
BHL	Straight Hole				
	Latitude: 40.026320	Longitude: -109.697850		NAD 83	
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: BLM (MINERALS), BIA (SURFACE), UDOGM, Tri-County Health Dept.				

LOGS	GEOLOGICAL FORMATION TOPS	DEPTH	MECHANICAL HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'	14"		
			12-1/4"	9-5/8", 36#, J-55, LTC	Air mist

All water flows encountered while drilling will be reported to the appropriate agencies.

Green River @	1,814'
Top of Birds Nest Water @	2,043'
Mahogany @	2,564'
Preset f/ GL @	2,800' MD

Note: 12.25" surface hole will usually be drilled ±400' below the bottom of lost circulation zone. Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.

Mud logging program TBD

Open hole logging program from TD - surf csg

Wasatch @	5,299'
Mverde @	8,819'
MVU2 @	9,804'
MVL1 @	10,248'
TD @	11,000'

7-7/8"	4-1/2" 11.6# P-110 or equivalent LTC casing	Water/Fresh Water Mud 8.3-10.0 ppg
		Max anticipated Mud required 12.5 ppg

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						
						3,520	2,020	453,000
SURFACE	9-5/8"	0 to 2800	36.00	J-55	LTC	0.74	1.54	5.72
						10,690	7,580	279,000
PRODUCTION	4-1/2"	0 to 11000	11.60	P-110	LTC	2.26	1.06	2.51

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
(Burst Assumptions: TD = 12.5 ppg) 0.22 psi/ft = gradient for partially evac wellbore
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MASP 4,605 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
(Burst Assumptions: TD = 12.5 ppg) 0.64 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 7,025 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE Option 1	LEAD	500	Premium cmt + 2% CaCl + .25 pps flocele	215	60%	15.60	1.18
	TOP OUT CMT (1)	200	20 gals sodium silicate + Premium cmt + 2% CaCl + .25 pps flocele	50		15.60	1.18
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE Option 2		NOTE: If well will circulate water to surface, option 2 will be utilized					
	LEAD	1500	Prem cmt + 16% Gel + 10 pps gilsonite + .25 pps Flocele + 3% salt BWOC	170	35%	11.00	3.82
	TAIL	500	Premium cmt + 2% CaCl + .25 pps flocele	180	35%	15.60	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	4,790'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	520	60%	11.00	3.38
	TAIL	6,210'	50/50 Poz/G + 10% salt + 2% gel + .1% R-3	1740	60%	14.30	1.31

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

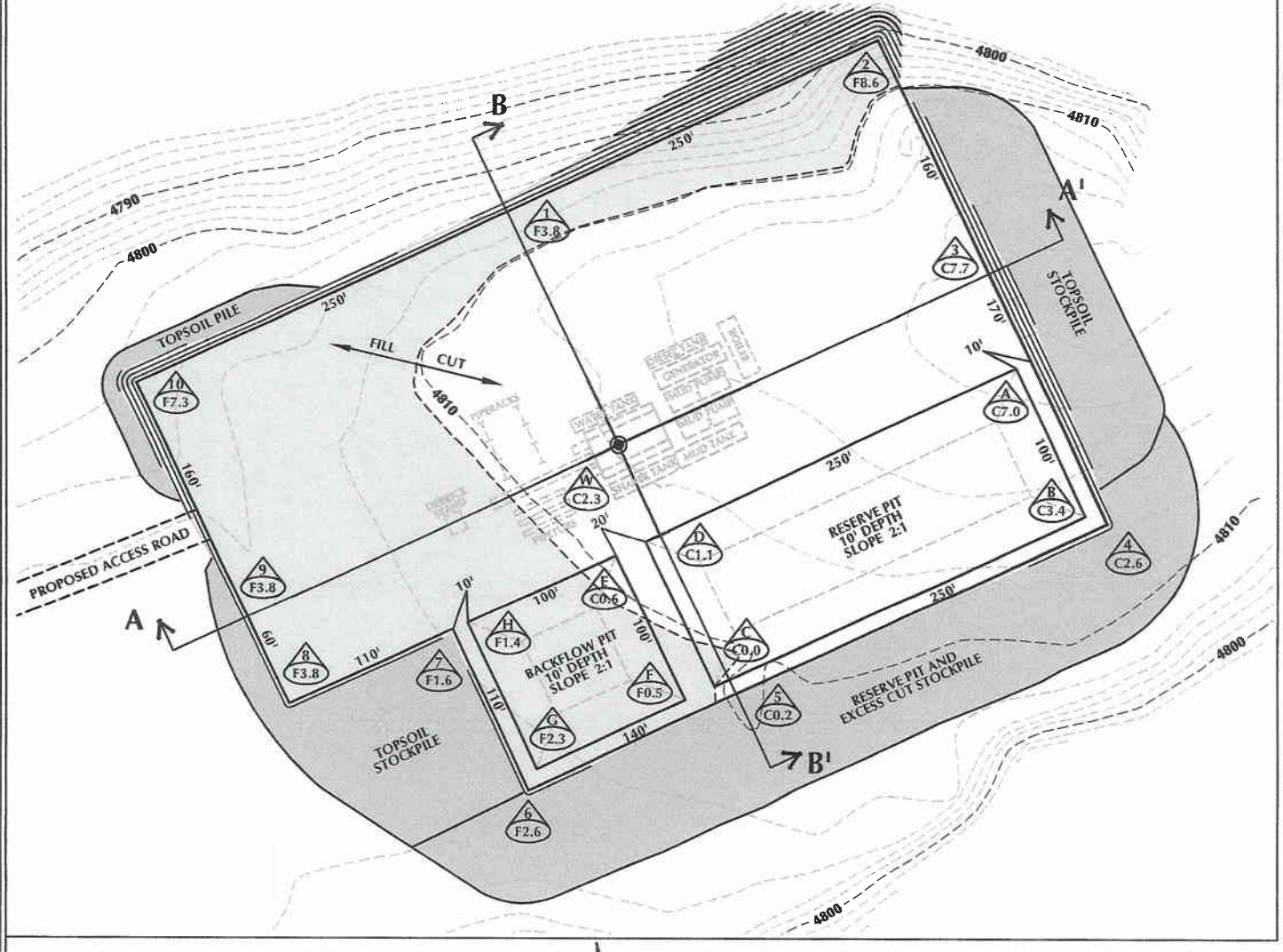
BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: _____ **DATE:** _____
John Huycke / Grant Schluender

DRILLING SUPERINTENDENT: _____ **DATE:** _____
John Merkel / Lovel Young



WELL PAD LEGEND

- WELL LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)

WELL PAD NBU 920-20D QUANTITIES

EXISTING GRADE @ LOC. STAKE = 4,812.1'
FINISHED GRADE ELEVATION = 4,809.8'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 9,013 C.Y.
TOTAL FILL FOR WELL PAD = 8,621 C.Y.
TOPSOIL @ 6" DEPTH = 3,048 C.Y.
EXCESS MATERIAL = 392 C.Y.
TOTAL DISTURBANCE = 3.78 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 25,880 BARRELS
RESERVE PIT VOLUME
+/- 7,185 CY
BACKFLOW PIT CAPACITY (2' OF FREEBOARD)
+/- 8,780 BARRELS
BACKFLOW PIT VOLUME
+/- 2,520 CY

HORIZONTAL 0 50 100 1" = 100'

2' CONTOURS

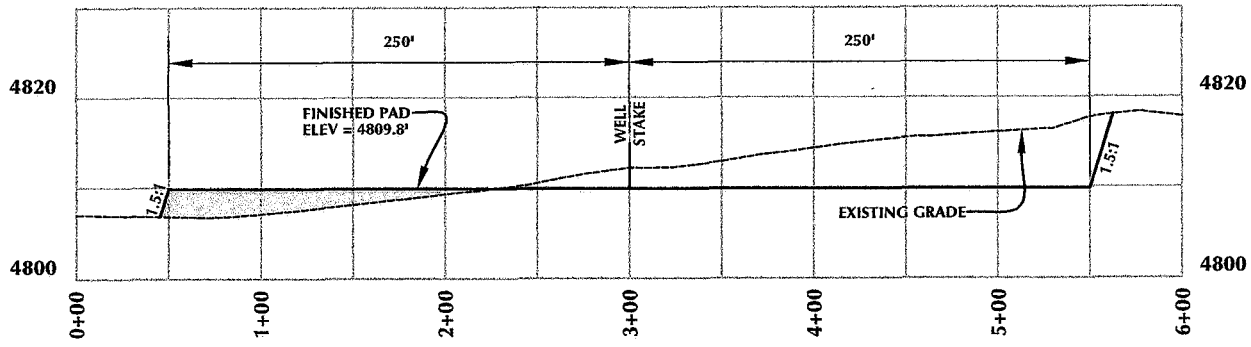
KERR-MCGEE OIL & GAS ONSHORE L.P.
1099 18th Street - Denver, Colorado 80202

NBU 920-20D
WELL PAD - LOCATION LAYOUT
646' FNL, 686' FWL
NW1/4NW1/4, SECTION 20, T.9S., R.20E.
S.L.B.&M., UINTAH COUNTY, UTAH

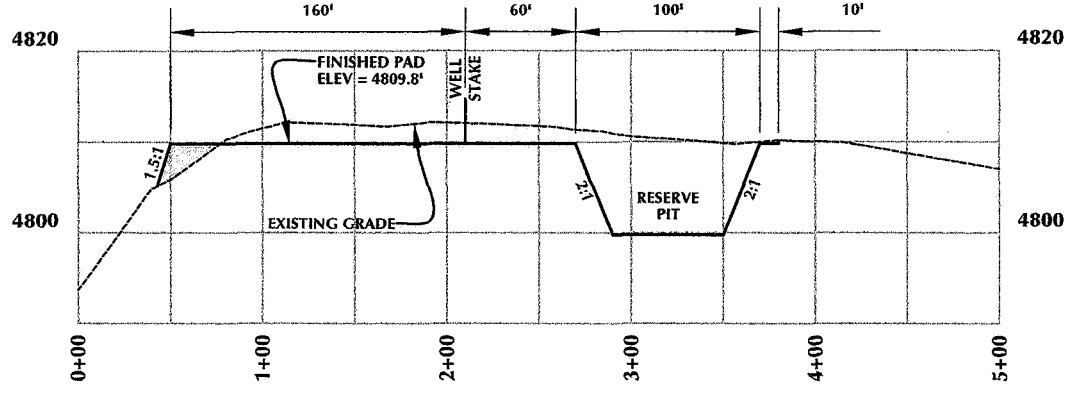
609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

Scale: 1"=100'	Date: 12/17/08	SHEET NO:
REVISED:	BY DATE	2 OF 9

Timberline (435) 789-1365
Engineering & Land Surveying, Inc.
38 WEST 100 NORTH VERNAL, UTAH 84078



CROSS SECTION A-A'



CROSS SECTION B-B'

KERR-MCGEE OIL & GAS
ONSHORE L.P.
1099 18th Street - Denver, Colorado 80202

NBU 920-20D
WELL PAD - CROSS SECTIONS
646' FNL, 686' FWL
NW1/4NW1/4, SECTION 20, T.9S., R.20E.
S.L.B.&M., UINTAH COUNTY, UTAH

609
CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

Scale: 1"=100'	Date: 12/17/08	SHEET NO:
REVISED:	BY DATE	3 OF 9

HORIZONTAL 0 50 100 1" = 100'
VERTICAL 0 10 20 1" = 20'

Timberline (435) 789-1365
Engineering & Land Surveying, Inc.
38 WEST 100 NORTH VERNAL, UTAH 84078

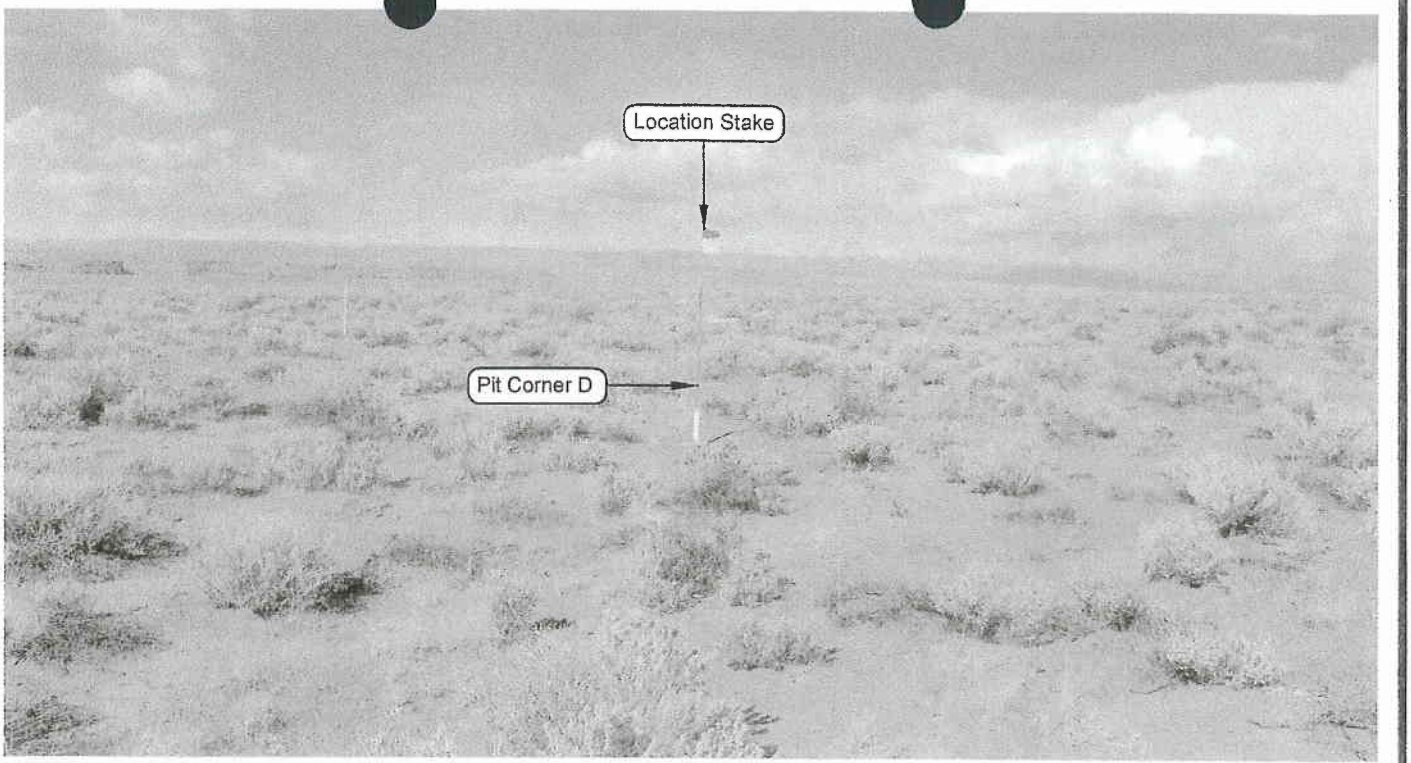


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHERLY

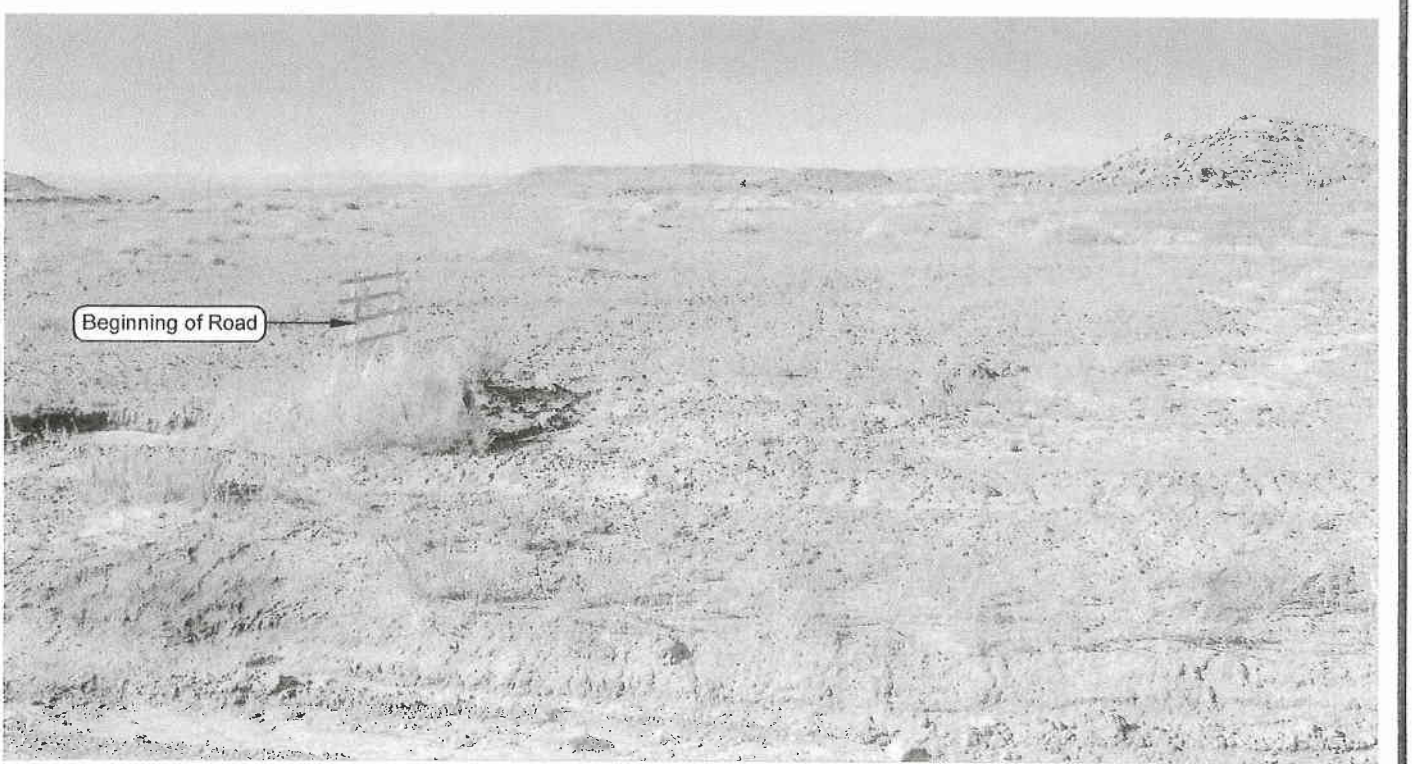


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: WESTERLY

Kerr–McGee
Oil & Gas Onshore, LP
1099 18th Street – Denver, Colorado 80202

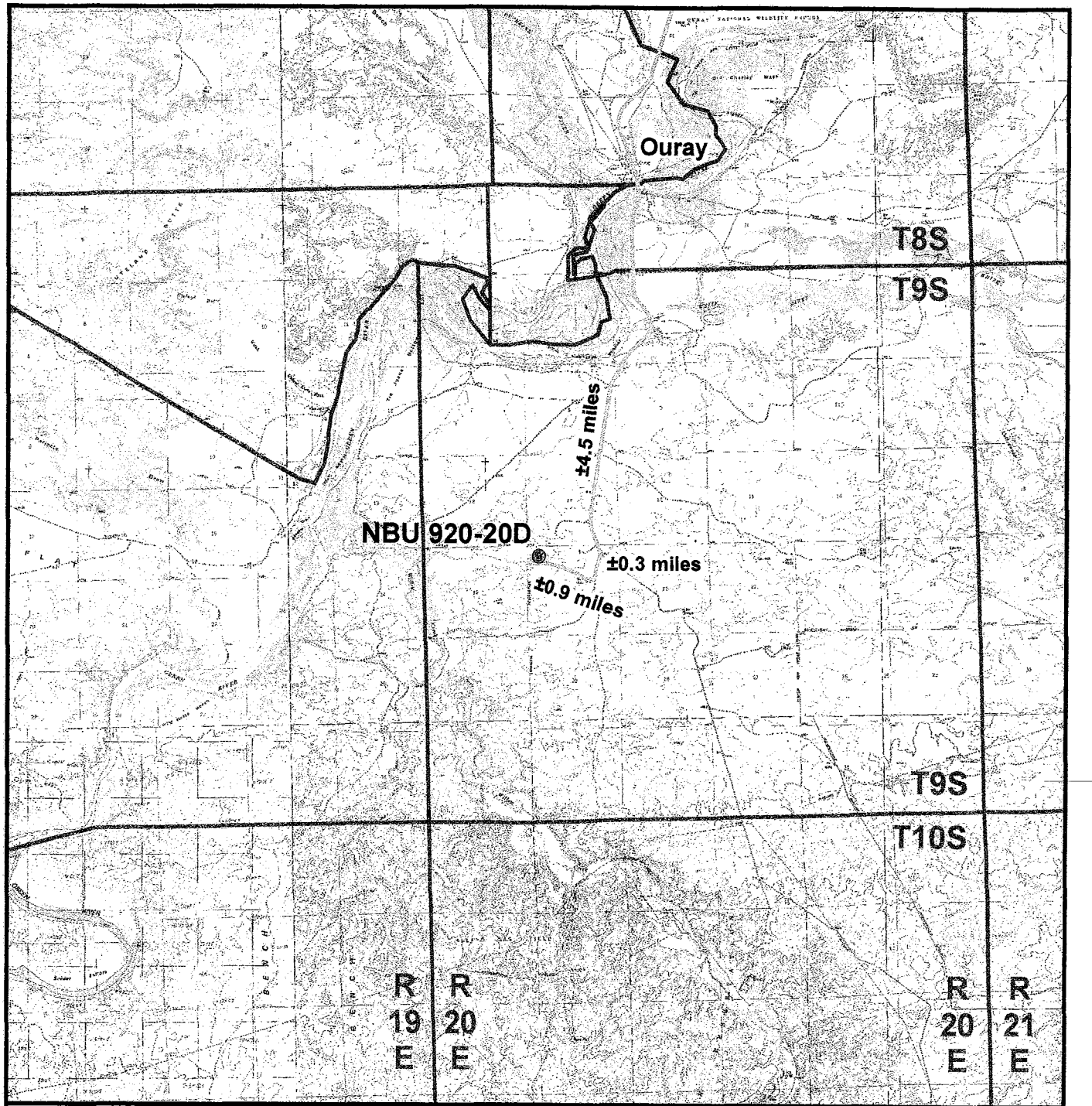
NBU 920-20D
646' FNL, 686' FWL
NW ¼ NW ¼ OF SECTION 20, T9S, R20E,
S.L.B.&M. UINTAH COUNTY, UTAH.

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

LOCATION PHOTOS		DATE TAKEN: 11-04-08
		DATE DRAWN: 11-10-08
TAKEN BY: D.J.S.	DRAWN BY: E.M.S.	REVISED:

Timberline (435) 789-1365
Engineering & Land Surveying, Inc.
38 WEST 100 NORTH VERNAL, UTAH 84078

SHEET 4 OF 9



Legend

- Proposed NBU 920-20D Well Location
- Access Route - Proposed

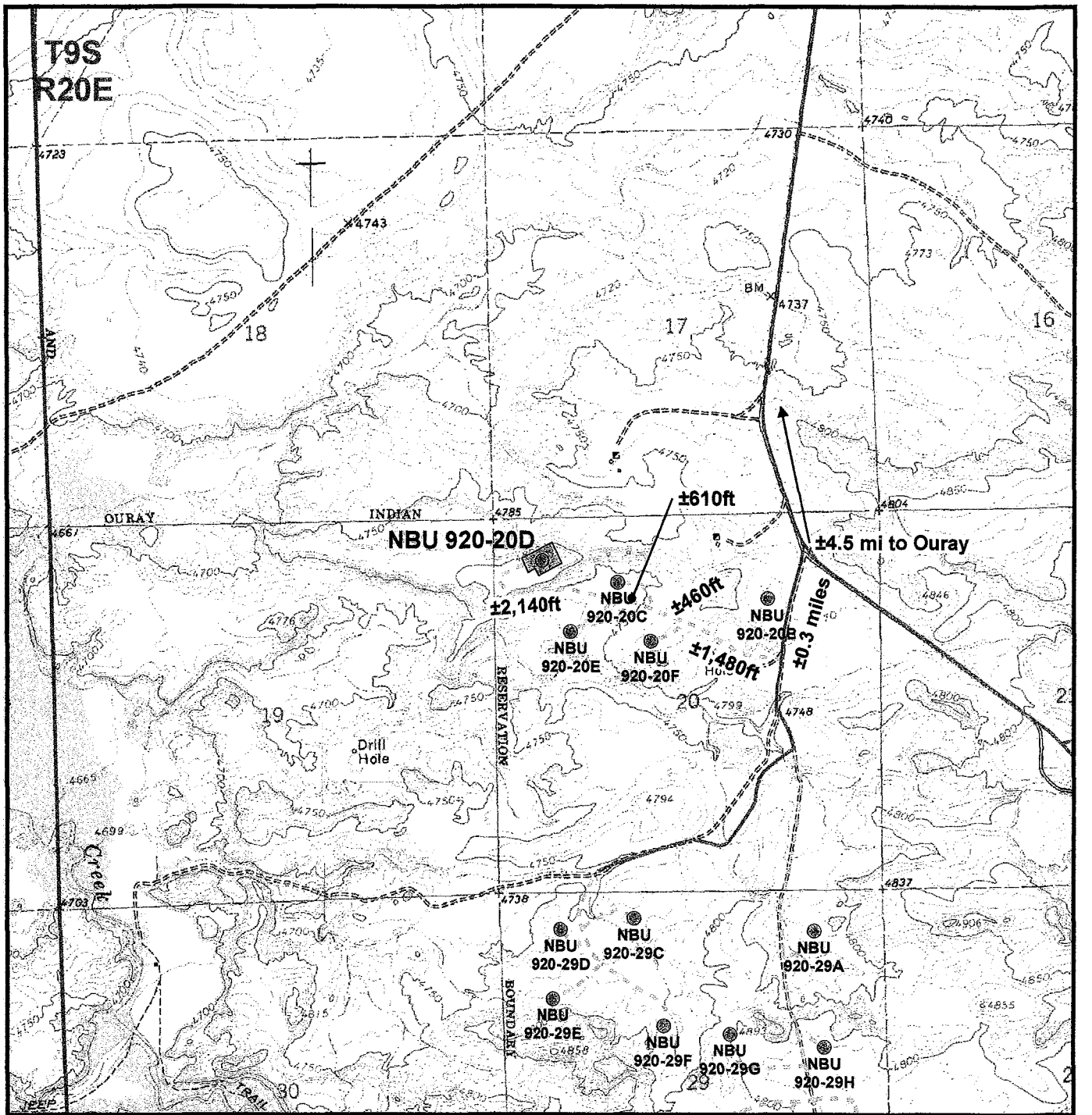
Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

NBU 920-20D
Topo A
646' FNL, 686' FWL
NW¼ NW¼, Section 20, T9S, R20E
S.L.B.&M., Uintah County, Utah

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: JELo	Date: 18 Dec 2008	5
Revised:	Date:	



Legend

Total Proposed Road Length: ±2,140ft

Well - Proposed | Well Pad | Road - Proposed | Road - Existing

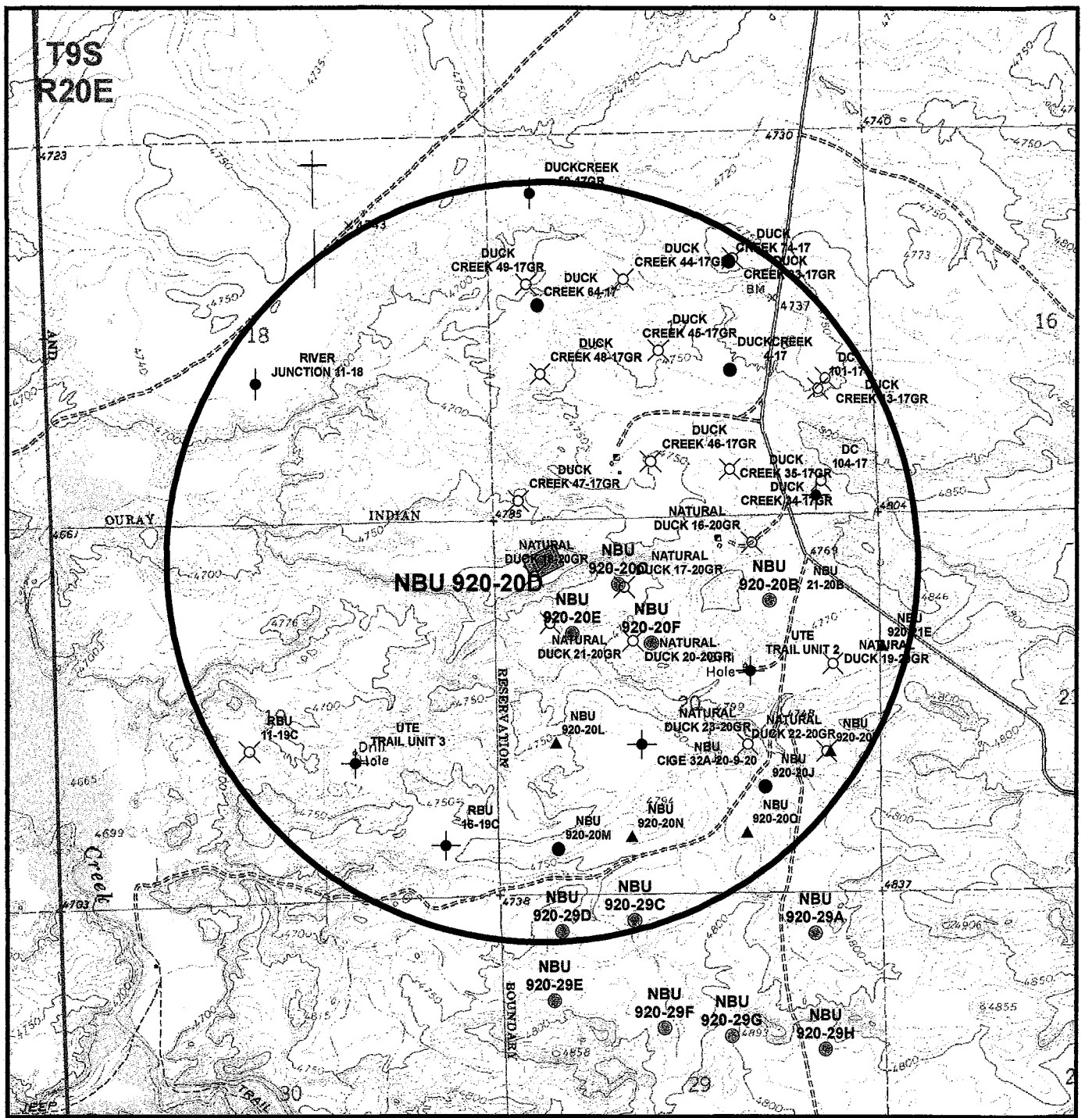
Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

NBU 920-20D
Topo B
646' FNL, 686' FWL
NW¼ NW¼, Section 20, T9S, R20E
S.L.B.&M., Uintah County, Utah

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 2000ft	NAD83 USP Central	Sheet No: 6	6 of 9
Drawn: JELo	Date: 18 Dec 2008		
Revised:	Date:		



Legend

Well locations derived from State of Utah, Dept. of Natural Resources, Division of Oil, Gas and Mining

- Well - Proposed
- Well - 1 Mile Radius
- Well Pad
- Producing
- Approved permit (APD); not yet spudded
- Spudded (Drilling commenced: Not yet comple
- Location Abandoned
- Temporarily-Abandoned
- Plugged and Abandoned
- Shut-In

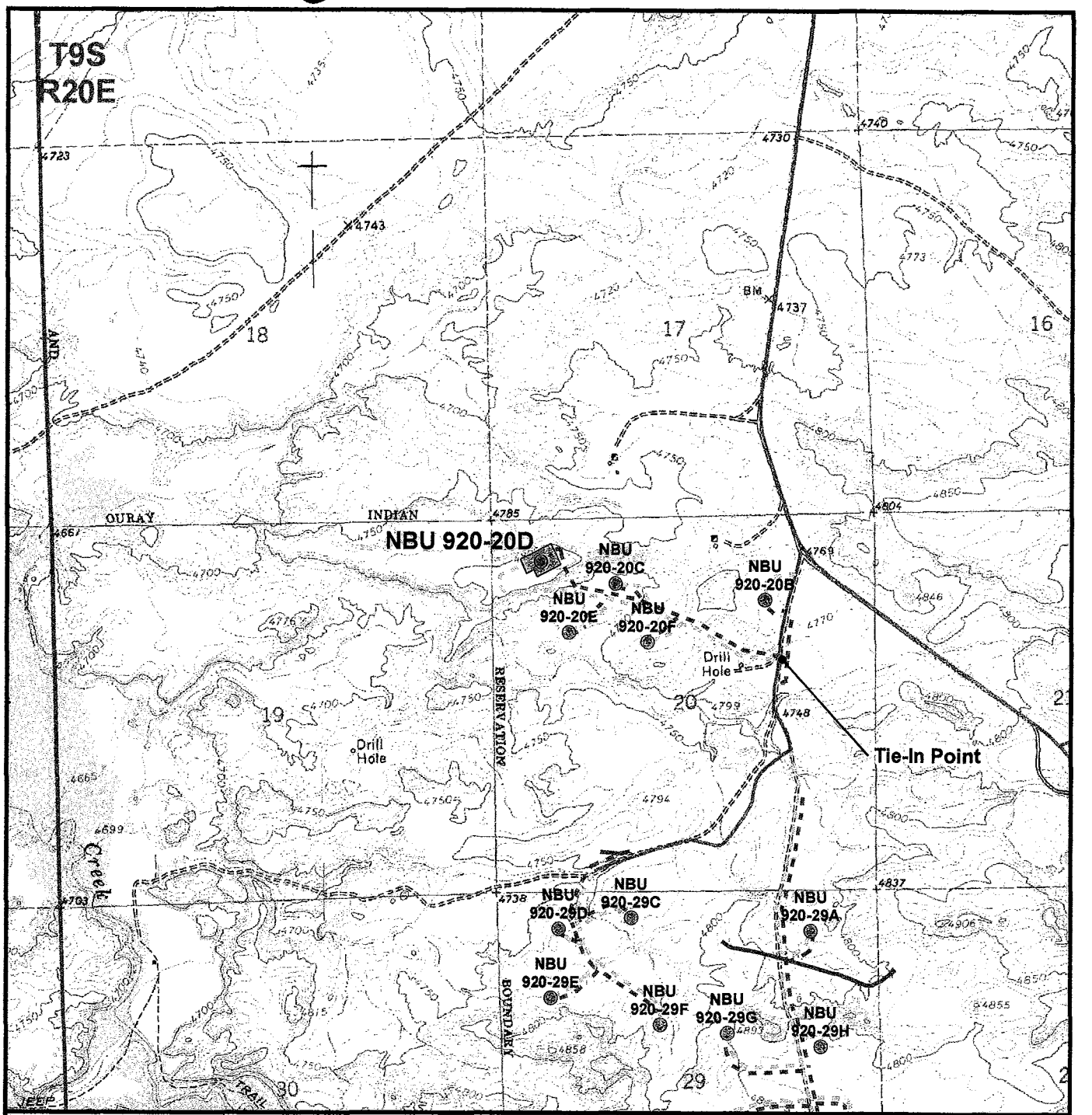
Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

NBU 920-20D
Topo C
646' FNL, 686' FWL
NW¼ NW¼, Section 20, T9S, R20E
S.L.B.&M., Uintah County, Utah

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 2000ft	NAD83 USP Central	Sheet No: 7	7 of 9
Drawn: JELo	Date: 18 Dec 2008		
Revised:	Date:		



Legend

Total Proposed Pipeline Length: ±3,734ft

Well - Proposed | Well Pad | Pipeline - Proposed | Road - Proposed | Pipeline - Existing | Road - Existing

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

NBU 920-20D
Topo D
646' FNL, 686' FWL
NW¼ NW¼, Section 20, T9S, R20E
S.L.B.&M., Uintah County, Utah

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 2000ft	NAD83 USP Central	Sheet No: 8	8 of 9
Drawn: JELo	Date: 18 Dec 2008		
Revised:	Date:		

Kerr-McGee Oil & Gas Onshore, LP
NBU 920-20D
Section 20, T9S, R20E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 4.5 MILES TO THE INTERSECTION OF THE WILD HORSE BENCH ROAD (A CLASS D COUNTY ROAD). EXIT RIGHT AND PROCEED IN A SOUTHERLY DIRECTION ALONG THE WILD HORSE BENCH ROAD APPROXIMATELY 0.3 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN A NORTHWESTERLY, THEN NORTHEASTERLY DIRECTION APPROXIMATELY 4,690 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 36.4 MILES IN A SOUTHERLY DIRECTION.

IPC #08-361

Paleontological Reconnaissance Survey Report

Survey of Kerr McGee's Proposed Gathering Pipeline, Well Pads, Access Roads, and Pipelines for "NBU #920-20C, D, E, & F" & "NBU #920-29K, L, J, & O" (Sec. 20 & 29, T 9 S, R 20 E)

Ouray
Topographic Quadrangle
Uintah County, Utah

December 17, 2008

Prepared by Stephen D. Sandau
Paleontologist for
Intermountain Paleo-Consulting
P. O. Box 1125
Vernal, Utah 84078

INTRODUCTION

At the request of Raleen White of Kerr McGee Onshore LP and authorized by Bruce Pargeets of the Ute Indian Tribe and by Larry Love, Director of the Ute Indian Tribe's Energy and Minerals Department, a paleontological reconnaissance survey of Kerr McGee's proposed gathering pipeline, well pads, access roads, and pipelines for "NBU #920-20C, D, E, & F" and "NBU #920-29K, L, J, & O" (Sec. 20 & 29, T 9 S, R 20 E) was conducted by David Alderks on December 9, 2008. The survey was conducted under the Ute Indian Tribe Business License FY 2009, #A09-1308 and the accompanying Access Permit (effective 10/15/2008 through 3/31/2009). This survey to locate, identify and evaluate paleontological resources was done to meet requirements of the National Environmental Policy Act of 1969 and other State and Federal laws and regulations that protect paleontological resources.

FEDERAL AND STATE REQUIREMENTS

As mandated by the Federal and State government, paleontologically sensitive geologic formations on State lands that are considered for exchange or may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

1) The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321.et. Seq., P.L. 91-190);
2) The Federal Land Policy and Management Act (FLPMA) of 1976 (90 Stat. 2743, 43 U.S.C. § 1701-1785, et. Seq., P.L. 94-579) and
3) The National Historic Preservation Act.16 U.S.C. § 470-1, P.L. 102-575 in conjunction with 42 U.S.C. § 5320

The new Potential Fossil Yield Classification (PFYC) System (October, 2007) replaces the Condition Classification System from Handbook H-8270-1. Geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential.

- ***Class 1*** **– Very Low.** Geologic units (igneous, metamorphic, or Precambrian) not likely to contain recognizable fossil remains.
- ***Class 2*** **– Low.** Sedimentary geologic units not likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils. (Including modern eolian, fluvial and colluvial deposits etc…)
- ***Class 3*** **– Moderate or Unknown.** Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential.
    - ***Class 3a*** **– Moderate Potential.** The potential for a project to be sited on or impact a significant fossil locality is low, but is somewhat higher for common fossils.
    - ***Class 3b*** **– Unknown Potential.** Units exhibit geologic features and preservational conditions that suggest significant fossils could be present, but

little information about the paleontological resources of the unit or the area is known.

- ***Class 4* – High.** Geologic units containing a high occurrence of vertebrate fossils or scientifically significant invertebrate or plant fossils, but may vary in abundance and predictability.
    - ***Class 4a*** – Outcrop areas with high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
    - ***Class 4b*** – Areas underlain by geologic units with high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.
- ***Class 5* – Very High.** Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils.
    - ***Class 5a*** - Outcrop areas with very high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
    - ***Class 5b*** - Areas underlain by geologic units with very high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.

It should be noted that many fossils, though common and unimpressive in and of themselves, can be important paleo-environmental, depositional, and chronostratigraphic indicators.

LOCATION

Kerr McGee's proposed gathering pipeline, well pads, access roads, and pipelines for "NBU #920-20C, D, E, & F" and "NBU #920-29K, L, J, & O" (Sec. 20 & 29, T 9 S, R 20 E) are located on Ute Indian Reservation land about 1-2 miles east of Willow Creek, approximately 5-6 miles southwest of the White River, and some 5-6 miles south of Ouray, Utah. The project area can be found on the Ouray 7.5 minute U. S. Geological Survey Quadrangle Map, Uintah County, Utah.

PREVIOUS WORK

The basins of western North America have long produced some of the richest fossil collections in the world. Early Cenozoic sediments are especially well represented throughout the western interior. Paleontologists started field work in Utah's Uinta Basin as early as 1870 (Betts, 1871; Marsh, 1871, 1875a, 1875b). The Uinta Basin is located in the northeastern corner of Utah and covers approximately 31,000 sq. km (12,000 sq. miles) ranging in elevation from 1,465 to 2,130 m (4,800 to 7,000 ft) (Marsell, 1964; Hamblin et al., 1987). Middle to late Eocene time marked a period of dramatic change in the climate, flora, (Stucky, 1992) and fauna (Black and Dawson, 1966) of North America.

GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW

Early in the geologic history of Utah, some 1,000 to 600 Ma, an east-west trending basin developed creating accommodation for 25,000 feet of siliclastics. Uplift of that filled-basin during the early Cenozoic formed the Uinta Mountains (Rasmussen et al., 1999). With the rise of the Uinta Mountains the asymmetrical synclinal Uinta Basin is thought to have formed through the effects of down warping in connection with the uplift. Throughout the Paleozoic and Mesozoic deposition fluctuated between marine and non-marine environments laying down a thick succession of sediments in the area now occupied by the Uinta Basin. Portions of these beds crop out on the margins of the basin due to tectonic events during the late Mesozoic.

Early Tertiary Uinta Basin sediments were deposited in alternating lacustrine and fluvial environments. Large shallow lakes periodically covered most of the basin and surrounding areas during early to mid Eocene time (Abbott, 1957). These lacustrine sediments show up in the western part of the basin, dipping 2-3 degrees to the northeast and are lost in the subsurface on the east side. The increase of cross-bedded, coarse-grained sandstone and conglomerates preserved in paleo-channels indicates a transition to a fluvial environment toward the end of the epoch.

Four Eocene formations are recognized in the Uinta Basin: the Wasatch, Green River, Uinta and Duchesne River, respectively (Wood, 1941). The Uinta Formation is subdivided into two lithostratigraphic units namely: the Wagonhound Member (Wood, 1934), formerly known as Uinta A and B (Osborn, 1895, 1929) and the Myton Member previously regarded as the Uinta C.

Within the Uinta Basin in northeast Utah, the Uinta Formation in the western part of the basin is composed primarily of lacustrine sediments inter-fingering with over-bank deposits of silt, and mudstone and westward flowing channel sands and fluvial clays, muds, and sands in the east (Bryant et al, 1990; Ryder et al, 1976). Stratigraphic work done by early geologists and paleontologists within the Uinta Formation focused on the definition of rock units and attempted to define a distinction between early and late Uintan faunas (Riggs, 1912; Peterson and Kay, 1931; Kay 1934). More recent work focused on magnetostratigraphy, radioscopic chronology, and continental biostratigraphy (Flynn, 1986; Prothero, 1996). Well-known for its fossiliferous nature and distinctive mammalian fauna of mid-Eocene Age, the Uinta Formation is the type formation for the Uintan Land Mammal Age (Wood et al, 1941).

The Duchesne River Formation of the Uinta Basin in northeastern Utah is composed of a succession of fluvial and flood plain deposits composed of mud, silt, and sandstone. The source area for these late Eocene deposits is from the Uinta Mountains indicated by paleocurrent data (Anderson and Picard, 1972). In Peterson's (1931c) paper, the name "Duchesne Formation" was applied to the formation and it was later changed to the "Duchesne River Formation" by Kay (1934). The formation is divided up into four members: the Brennan Basin, Dry Gulch Creek, LaPoint, and Starr Flat (Anderson and Picard, 1972). Debates concerning the Duchesne River Formation, as to whether its age was late Eocene or early Oligocene, have surfaced throughout the literature of the last century (Wood et al., 1941; Scott 1945). Recent paleo-magnetostratigraphic work (Prothero, 1996) shows that the Duchesne River Formation is late Eocene in time.

FIELD METHODS

In order to determine if the proposed project area contained any paleontological resources, a reconnaissance survey was performed. An on-site observation of the proposed areas undergoing surficial disturbance is necessary because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

When found within the proposed construction areas, outcrops and erosional surfaces were checked to determine if fossils were present and to assess needs. Careful effort is made during surveys to identify and evaluate significant fossil materials or fossil horizons when they are found. Microvertebrates, although rare, are occasionally found in anthills or upon erosional surfaces and are of particular importance.

PROJECT AREA

The project area is situated in the Wagonhound Member (Uinta A & B) of the Uinta Formation. The following list provides a description of the individual wells and their associated pipelines and access roads.

NBU #920-20C

The proposed pipeline, access road, and well pad are located in the NE/NW quarter-quarter section of Sec. 20, T 9 S, R 20 E (Figure 1). The access road and pipeline divert from the pipeline and access road to "NBU 920-20D" and travel to the north about 400 feet to the well pad. The pipeline and access road start in sand dunes and transitions into a gray mudstone. The well pad is located in a relatively flat mudstone area surrounded on the north by hills capped by red and tan mudstones. Several fragments of turtle shell were found on the well pad and access road.

NBU #920-20D
The proposed pipeline and access road start in the SE/NE quarter-quarter section of Sec. 20, T 9 S, R 20 E and run generally to the east for about 0.75 mile to the well pad located in the NW/NW quarter-quarter section of Sec. 20 (Figure 1). The access road and pipeline traverse a gray mudstone at the beginning of the route and then climb a small hill of mudstone crossing in a saddle between two maroon sandstone caped ridges. The access road and pipeline cross a small half basin before climbing a small hill comprised of sand dunes. The route then crosses a large mudstone flat, before making a final climb up a large hill layered with several tan and red (about 50 feet thick) sandstone bodies. The road then turns to the east and travels to the well pad in the NW/NW quarter-quarter section of Sec. 20. The well pad is located on a sandy, gray mudstone and is relatively flat and covered in sagebrush. Turtle shell fragments were discovered in several locations. These fossil fragments were two small and fragmented to determine the number or type of turtles.

NBU #920-20E
The proposed pipeline, access road, and well pad are located in the SE/NW quarter-quarter section of Sec. 20, T 9 S, R 20 E (Figure 1). The proposed pipeline and access road are located on a gray mudstone and also partially in a small wash. A few low lying hills are present on either side of the proposed pipeline and access road. The well pad is located on a gray mudstone surrounded by a few small hills. No fossils were found.

NBU #920-20F
The proposed pipeline, access road, and well pad are located in the SE/NW quarter-quarter section of Sec. 20, T 9 S, R 20 E (Figure 1). The proposed access road and pipeline are short and are situated over sand dunes which cover a gray mudstone. The well pad is located on a small hill partially comprised of gray mudstone and sand dunes. A tan sandstone outcrop was seen on the southern edge of the well pad. No fossils were found.

NBU #920-29K
The proposed pipeline, access road, and well pad are located in the NE/SW quarter-quarter section of Sec. 29, T 9 S, R 20 E (Figure 1). The proposed pipeline and access road run north from the pipeline and access road for "NBU 920-29L" for about 300 feet. The access road and pipeline are in sand soil with a few out crops of tan, arkosic, fluvial sandstone covered in sagebrush and desert grass. The well pad is located on top of a sandstone outcrop in sandy soil supporting desert grasses and sagebrush. No fossils were found.

Onsite Change to NBU #920-29L
The proposed onsite change to the pipeline starts in the NW/SE quarter-quarter section of Sec. 29, T 9 S, R 20 E and travels for about half a mile to the SE/SW quarter-quarter section of Sec. 29 (Figure 1). The pipeline traverses sand dunes vegetated with desert grasses and sagebrush. No fossils were found.

NBU #920-29J
The proposed pipeline, access road, and well pad are located in the NW/SE quarter-quarter section of Sec. 29, T 9 S, R 20 E (Figure 1). The proposed access road travels up hill over a sand dune. The proposed well pad is located on sand dunes vegetated with sagebrush and grass. A

tan sandstone outcrop was seen on the western edge of the well pad. A small drainage is located in the western part of the well pad. The proposed pipeline is located on the western edge of the well pad and is located in the sand dune field. No fossils were found.

NBU #920-29O
The proposed pipeline, access road, and well pad are located in the SW/SE quarter-quarter section of Sec. 29, T 9 S, R 20 E (Figure 1). The proposed access road and pipeline are short traveling west for about 150 feet. They traverse a gray mudstone that is slightly reworked by wind and water. The proposed well pad is located on mudstone with a sandstone ridge to the north of the well pad. No fossils were found.

Gathering Pipeline Sec. 29
The proposed gathering pipeline runs along an existing road from the NE/SE quarter-quarter section to the SE/SE section of Sec. 29, T 9 S, R 20 E. The proposed gathering pipeline travels across sand dunes, gray mudstones, and a few outcrops of tan sandstone covered in sagebrush and desert grasses. No fossils were found.

SURVEY RESULTS

PROJECT	GEOLOGY	PALEONTOLOGY
"NBU #920-20C" (Sec. 20, T 9 S, R 20 E)	The pipeline and access road start in sand dunes and transitions into a gray mudstone. The well pad is located in a relatively flat mudstone area surrounded on the north by hills capped by red and tan mudstones.	Several fragments of turtle shell were found on the well pad and access road. **Class 3a**
"NBU #920-20D" (Sec. 20, T 9 S, R 20 E)	The access road and pipeline traverse a gray mudstone at the beginning of the route and then climb a small hill of mudstone crossing in a saddle between two maroon sandstone caped ridges. The access road and pipeline cross a small half basin before climbing a small hill comprised of sand dunes. The route then crosses a large mudstone flat, before making a final climb up a large hill layered with several tan and red (about 50 feet thick) sandstone bodies. The road then turns to the east and travels to the well pad in the NW/NW quarter-quarter section of Sec. 20. The well pad is located on a sandy, gray mudstone and is relatively flat and covered in sagebrush.	Turtle shell fragments were discovered in several locations. These fossil fragments were two small and fragmented to determine the number or type of turtles. **Class 3a**
"NBU #920-20E" (Sec. 20, T 9 S, R 20 E)	The proposed pipeline and access road are located on a gray mudstone and also partially in a small wash. A few low lying hills are present on either side of the proposed pipeline and access road. The well pad is located on a gray mudstone surrounded by a few small hills.	No fossils were found. **Class 3a**

"NBU #920-20F" (Sec. 20, T 9 S, R 20 E)	The proposed access road and pipeline are short and are situated over sand dunes which cover a gray mudstone. The well pad is located on a small hill partially comprised of gray mudstone and sand dunes. A tan sandstone outcrop was seen on the southern edge of the well pad.	No fossils were found. **Class 3a**
"NBU #920-29K" (Sec. 29, T 9 S, R 20 E)	The access road and pipeline are in sand soil with a few out crops of tan, arkosic, fluvial sandstone covered in sagebrush and desert grass. The well pad is located on top of a sandstone outcrop in sandy soil supporting desert grasses and sagebrush.	No fossils were found. **Class 3a**
"Onsite Change to NBU #920-29L" (Sec. 29, T 9 S, R 20 E)	The pipeline traverses sand dunes vegetated with desert grasses and sagebrush.	No fossils were found. **Class 3a**
"NBU #920-29J" (Sec. 29, T 9 S, R 20 E)	The proposed access road travels up hill over a sand dune. The proposed well pad is located on sand dunes vegetated with sagebrush and grass. A tan sandstone outcrop was seen on the western edge of the well pad. A small drainage is located in the western part of the well pad. The proposed pipeline is located on the western edge of the well pad and is located in the sand dune field.	No fossils were found. **Class 3a**
"NBU #920-29O" (Sec. 29, T 9 S, R 20 E)	The proposed access road and pipeline traverse a gray mudstone that is slightly reworked by wind and water. The proposed well pad is located on mudstone with a sandstone ridge to the north of the well pad.	No fossils were found. **Class 3a**
"Gathering Pipeline Sec. 29" (Sec. 29, T 9 S, R 20 E)	The proposed gathering pipeline travels across sand dunes, gray mudstones, and a few outcrops of tan sandstone covered in sagebrush and desert grasses.	No fossils were found. **Class 3a**

RECOMMENDATIONS

A reconnaissance survey was conducted for Kerr McGee's proposed gathering pipeline, well pads, access roads, and pipelines for "NBU #920-20C, D, E, & F" and "NBU #920-29K, L, J, & O" (Sec. 20 & 29, T 9 S, R 20 E). The well pads and the associated access roads and pipelines covered in this report showed little to no signs of vertebrate fossils. Therefore, we recommend that no paleontological restrictions should be placed on the development of the projects included in this report.

Buried pipeline will encounter Uinta formational sediments along most of the staked pipeline corridors yet indications from surface fossils predict that little if any vertebrate fossils will be disturbed.

Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, recommendations are that a paleontologist is immediately notified in order to collect fossil materials in danger of being destroyed. Any vertebrate fossils found should be carefully moved outside of the construction areas to be check by a permitted paleontologist.

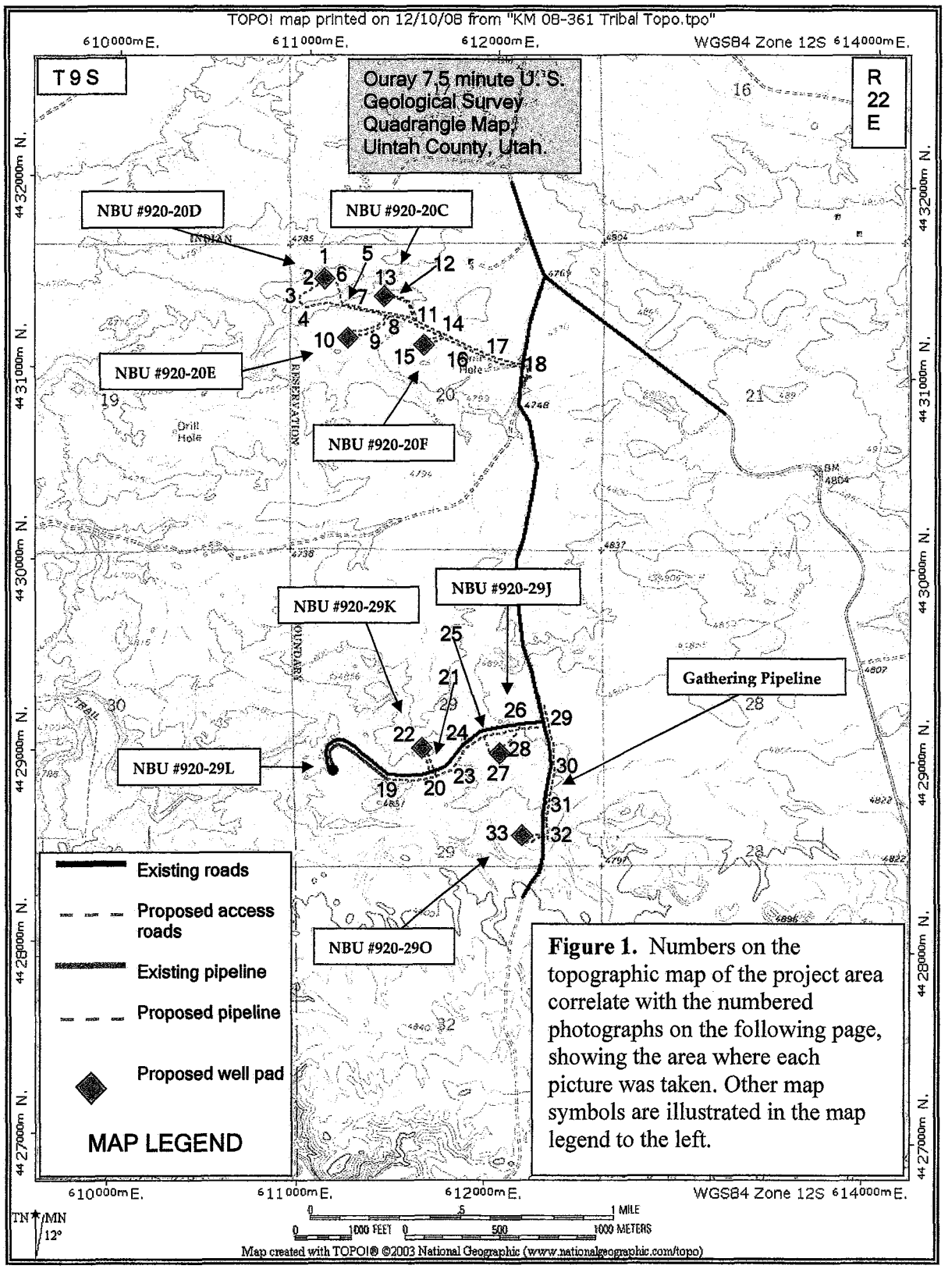


Figure 1. Numbers on the topographic map of the project area correlate with the numbered photographs on the following page, showing the area where each picture was taken. Other map symbols are illustrated in the map legend to the left.

Figure 1. *continued...*

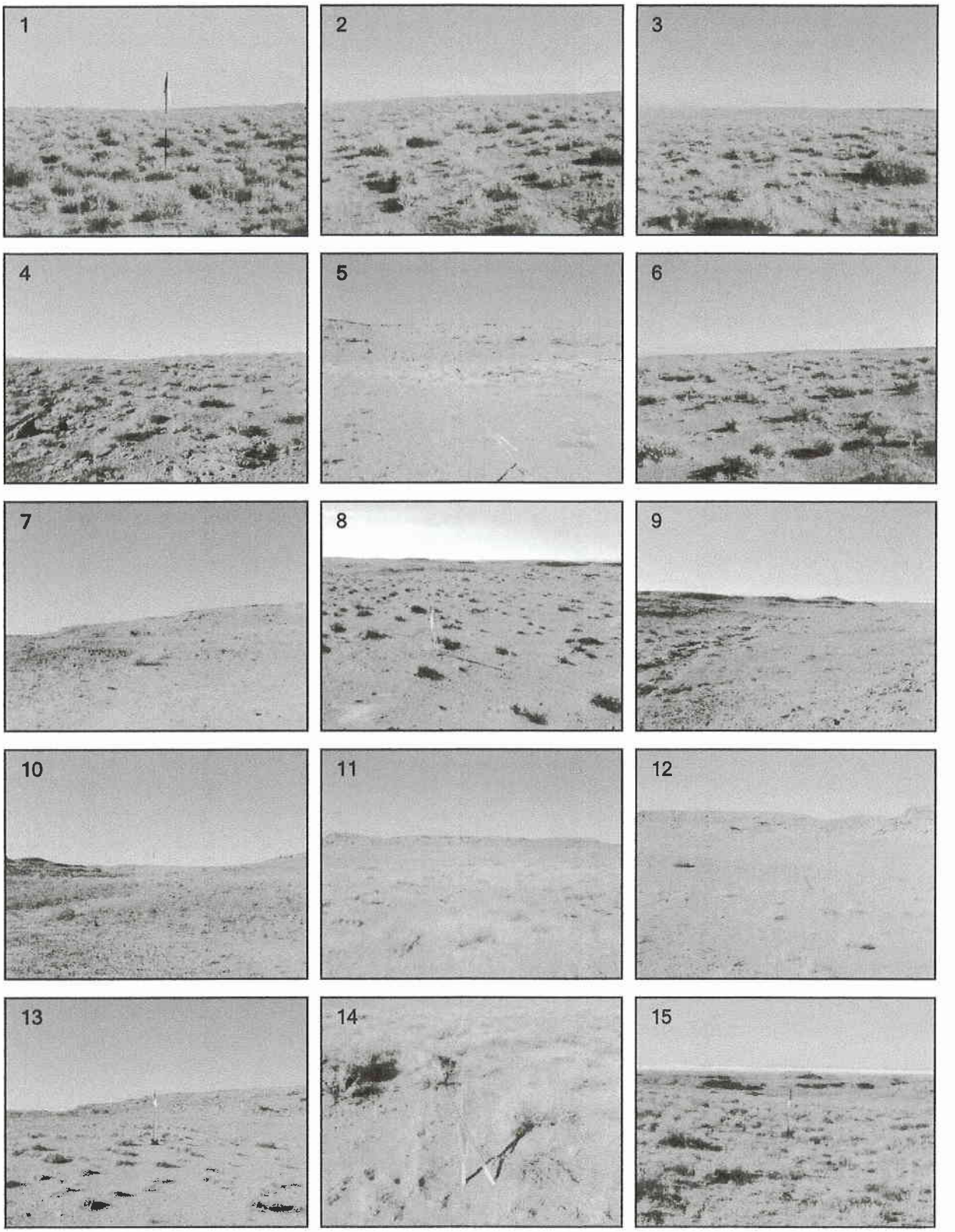


Figure 1. *continued...*

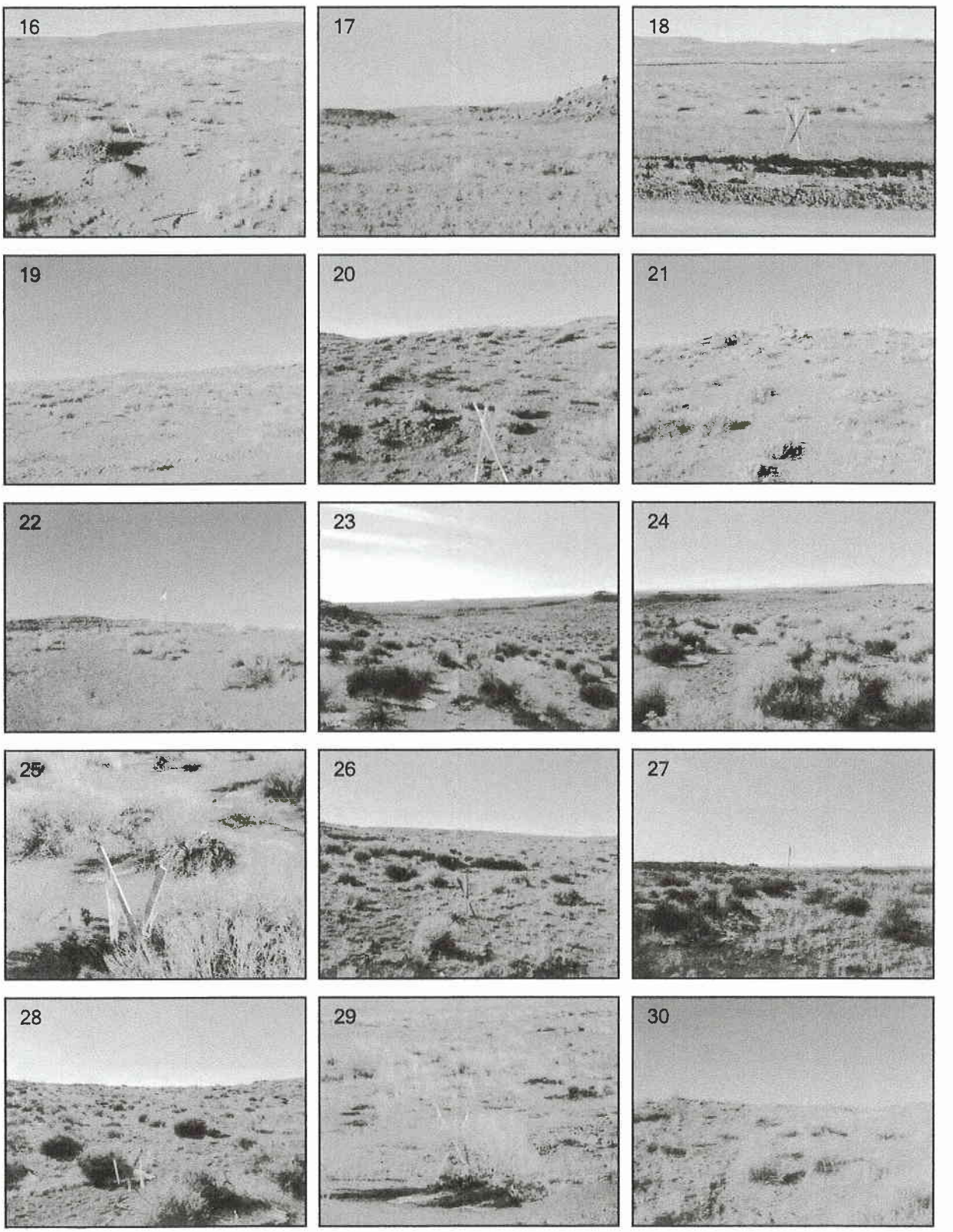
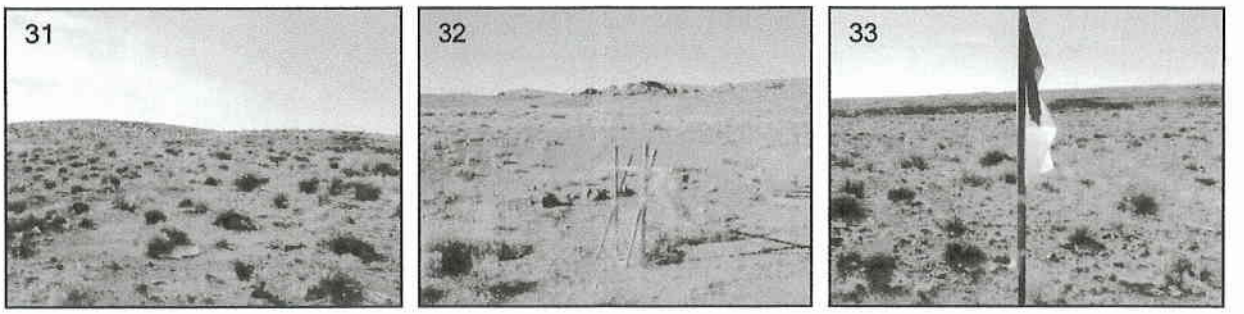


Figure 1. *continued...*



REFERENCES CITED

Abbott, W., 1957, Tertiary of the Uinta Basin: Intermountain Assoc. Petroleum Geologists Guidebook, Eighth Ann. Field Conf., p. 102-109.

Anderson, D. W., and Picard, M. D., 1972, Stratigraphy of the Duchesne River Formation (Eocene-Oligocene?), northern Uinta Basin, northeastern Utah: Utah Geological and Mineralogical Survey Bulletin 97, p. 1-28.

Betts, C. W., 1871, The Yale College expedition of 1870: Harper's New Monthly Magazine, v. 43, p. 663-671.

Black, C. C. and Dawson, M. R., 1966, A Review of Late Eocene Mammalian Faunas from North America: American Journal of Science, v. 264, p. 321-349.

Bryant, B., Naeser C. W., Marvin R. F., Mahnert H. H., 1989, Cretaceous and Paleogene Sedimentary Rocks and Isotopic Ages of Paleogene Tuffs,Uinta basin, Utah. And Ages of Late Paleogene and Neogene Tuffs and the Beginning of Rapid Regional Extension, Eastern Boundary of the Basin and Range Province near Salt lake City, Utah: In: Evolution of Sedimentary basins-Uinta and Piceance Basins. U. S. Geological Survey Bulletin 1787-J, K.

Flynn, J. J., 1986, Correlation and geochronology of middle Eocene strata from the western United States: Palaeogeographic, Palaeoclimatology, Palaeoecology, v. 55, p. 335-406.

Hamblin, A. H. and Miller, W. E., 1987, Paleogeography and Paleoecology of the Myton Pocket, Uinta Basin, Utah (Uinta Formation-Upper Eocene): Brigham Young University Geology Studies, v. 34, p 33-60.

Kay, J. L., 1934, Tertiary formations of the Uinta Basin, Utah: Annals of Carnegie Museum, v. 23, p. 357-371.

Marsell, R. E., 1964, Geomorphology of the Uinta Basin-A Brief Sketch: Thirteenth annual Field Conference. Association of Petroleum Geologists, p. 34-46.

Marsh, O. C., 1871, on the geology of the Eastern Uintah Mountains: American Journal of Science and Arts, v. 1, p. 1-8.

_____ 1875a, Ancient lake basins of the Rocky Mountain region: American Journal of Science and Arts, v. 9, p. 49-52.

_____ 1875b, Notice of new Tertiary mammals, IV: American Journal of Science and Arts, Third Series, v. 9, p. 239-250.

Osborn, H. F., 1895, Fossil mammals of the Uinta beds, expedition of 1894: American Museum of Natural History Bulletin, v. 7, p. 71-106.

_____ 1929, The Titanotheres of Ancient Wyoming, Dakota and Nebraska: Monograph of the U. S. Geological Survey, v. 55, p. 1-953.

Peterson, O. A., 1931c, new species from the Oligocene of the Uinta: Annals of Carnegie Museum, v. 21, p. 61-78.

Peterson, O. A. and Kay, J. L., 1931, The Upper Uinta Formation of Northeastern Utah: Annals of the Carnegie Museum, v. 20, p. 293-306.

Prothero, D. R., 1996, Magnetic Stratigraphy and biostratigraphy of the middle Eocene Uinta Formation, Uinta Basin, Utah, *in* Prothero, D. R., and Emry, R. J. editors, The Terrestrial Eocene-Oligocene Transition in North America, p. 3-24.

Rasmussen, D. T., Conroy, G. C., Friscia, A. R., Townsend, K. E. and Kinkel, M. D., 1999, Mammals of the middle Eocene Uinta Formation: Vertebrate Paleontology of Utah, p. 401-420.

Riggs, E. S., 1912. New or Little Known Titanotheres from the Lower Uintah Formations: Field Museum of Natural History Geological Series, v. 159, p. 17-41.

Ryder, R. T., Fouch, T. D., Elison, J. H., 1976, Early Tertiary sedimentation in the western Uinta Basin, Utah: Geological Society of America Bulletin v. 87, p. 496-512.

Scott, W. B., 1945, The Mammalia of the Duchesne River Oligocene: Transactions of the American Philosophical Society, v. 34, p. 209-253.

Stucky, R. K., 1992, Mammalian faunas in North America of Bridgerian to early Arikareean "age" (Eocene and Oligocene), in Prothero, D. R., and Berggren, W. A., eds., Eocene-Oligocene climatic and biotic evolution: Princeton University Press, p. 464-493.

Wood, H. E., 1934, Revision of the Hyrachyidaes: American Museum of Natural History Bulletin, v. 67, p. 181-295.

_____ and others, 1941, Nomenclature and Correlation of the North America Continental Tertiary: Geol. Soc. Amer. Bull., v. 52, no. 1, Jan. 1, p. 1-48. 52, no. 1, Jan. 1, p. 1-48.

WORKSHEET

APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 02/17/2009

API NO. ASSIGNED: 43-047-40540

WELL NAME: NBU 920-20D

OPERATOR: KERR-MCGEE OIL & GAS (N2995)

PHONE NUMBER: 720-929-6666

CONTACT: RALEEN WHITE

PROPOSED LOCATION:

NWNW 20 090S 200E

SURFACE: 0646 FNL 0686 FWL

BOTTOM: 0646 FNL 0686 FWL

COUNTY: UINTAH

LATITUDE: 40.02621 LONGITUDE: -109.6971

UTM SURF EASTINGS: 611175 NORTHINGS: 4431269

FIELD NAME: NATURAL BUTTES (630)

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-144867A

SURFACE OWNER: 2 - Indian

PROPOSED FORMATION: WSMVD

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

✓ Plat

✓ Bond: Fed[1] Ind[] Sta[] Fee[]
(No. WYB000291)

N Potash (Y/N)

N Oil Shale 190-5 (B) or 190-3 or 190-13

✓ Water Permit
(No. 43-8496)

N RDCC Review (Y/N)
(Date:)

NA Fee Surf Agreement (Y/N)

NA Intent to Commingle (Y/N)

LOCATION AND SITING:

___ R649-2-3.

Unit: NATURAL BUTTES

___ R649-3-2. General

Siting: 460 From Qtr/Qtr & 920' Between Wells

___ R649-3-3. Exception

✓ Drilling Unit

Board Cause No: 173-14

Eff Date: 12-2-1999

Siting: 460' fr u.bdry & uncomm. Tract

___ R649-3-11. Directional Drill

COMMENTS: Sop, Separate file

STIPULATIONS: 1- Federal Approval
2- Oil Shale

API Number: 4304740540

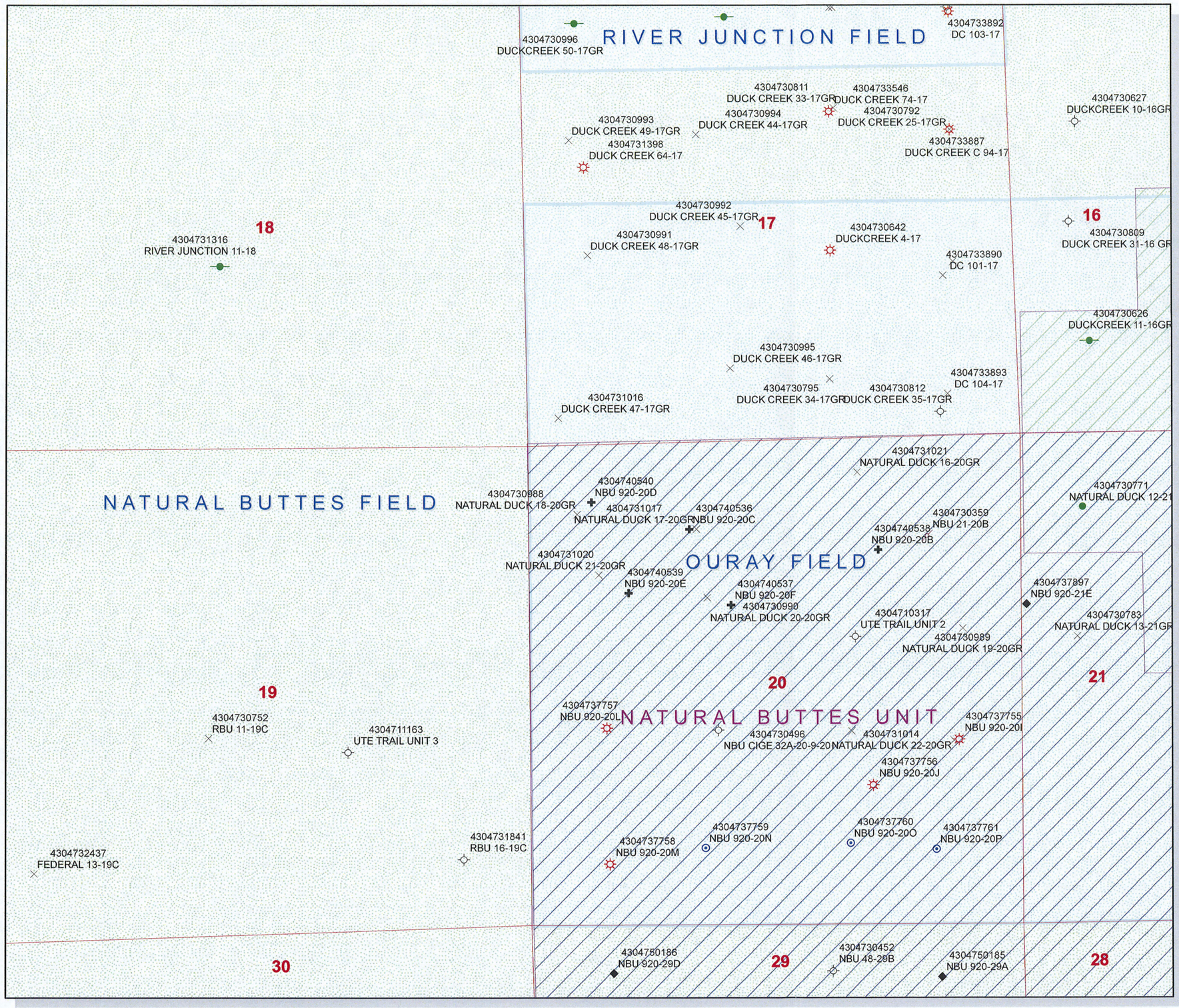
Well Name: NBU 920-20D

Township 09.0 S Range 20.0 E Section 20

Meridian: SLBM

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
Map Produced by Diana Mason



Units

STATUS
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Fields

STATUS
- ACTIVE
- COMBINED
- Sections

Wells Query Events
- <all other values>

GIS_STAT_TYPE
- <Null>
- APD
- DRL
- GI
- GS
- LA
- NEW
- OPS
- PA
- PGW
- POW
- RET
- SGW
- SOW
- TA
- TW
- WD
- WI
- WS

1,500 750 0 1,500 Feet

1:13,293

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

March 2, 2009

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2009 Plan of Development Natural Buttes Unit Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ Wasatch/MesaVerde)		
43-047-40553	NBU 920-29O	Sec 29 T09S R20E 0746 FSL 2465 FEL
43-047-40554	NBU 920-29L	Sec 29 T09S R20E 1572 FSL 0754 FWL
43-047-40555	NBU 920-29M	Sec 29 T09S R20E 0159 FSL 0757 FWL
43-047-40556	NBU 920-29I	Sec 29 T09S R20E 2164 FSL 0400 FEL
43-047-40557	NBU 920-29K	Sec 29 T09S R20E 2208 FSL 2197 FWL
43-047-40558	NBU 920-29P	Sec 29 T09S R20E 1038 FSL 0018 FEL
43-047-40559	NBU 920-29J	Sec 29 T09S R20E 1977 FSL 1747 FEL
43-047-40560	NBU 920-29N	Sec 29 T09S R20E 1254 FSL 2098 FWL
43-047-40542	NBU 920-22O	Sec 22 T09S R20E 0198 FSL 2487 FEL
43-047-40543	NBU 920-22K	Sec 22 T09S R20E 2128 FSL 2497 FWL
43-047-40544	NBU 920-22I	Sec 22 T09S R20E 1965 FSL 0599 FEL
43-047-40545	NBU 920-22J	Sec 22 T09S R20E 2086 FSL 1575 FEL
43-047-40538	NBU 920-20B	Sec 20 T09S R20E 1229 FNL 1580 FEL
43-047-40536	NBU 920-20C	Sec 20 T09S R20E 0963 FNL 1754 FWL
43-047-40537	NBU 920-20F	Sec 20 T09S R20E 1794 FNL 2199 FWL
43-047-40539	NBU 920-20E	Sec 20 T09S R20E 1644 FNL 1084 FWL
43-047-40540	NBU 920-20D	Sec 20 T09S R20E 0646 FNL 0686 FWL
43-047-40541	NBU 920-21J	Sec 21 T09S R20E 2346 FSL 1748 FEL
43-047-40561	NBU 920-32E	Sec 32 T09S R20E 2052 FNL 0707 FWL
43-047-40562	NBU 920-32K	Sec 32 T09S R20E 2095 FSL 1813 FWL
43-047-40567	NBU 920-33D	Sec 33 T09S R20E 0821 FNL 0925 FWL
43-047-40568	NBU 920-33L	Sec 33 T09S R20E 2299 FSL 0625 FWL
43-047-40574	NBU 920-33E	Sec 33 T09S R20E 2079 FNL 0611 FWL
43-047-40575	NBU 920-33C	Sec 33 T09S R20E 0971 FNL 1851 FWL

43-047-40576 NBU 920-33F Sec 33 T09S R20E 2048 FNL 1845 FWL
43-047-40535 NBU 920-15PT Sec 15 T09S R20E 0591 FSL 0696 FEL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File – Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:3-2-09

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

March 2, 2009

Kerr-McGee Oil & Gas Onshore, LP
P O Box 173779
Denver, CO 80217-3779

Re: NBU 920-20D Well, 646' FNL, 686' FWL, NW NW, Sec. 20, T. 9 South, R. 20 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-40540.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

cc: Uintah County Assessor
Bureau of Land Management, Vernal Office

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING

Operator: Kerr-McGee Oil & Gas Onshore, LP

Well Name & Number NBU 920-20D

API Number: 43-047-40540

Lease: UTU-144867A

Location: NW NW **Sec.** 20 **T.** 9 South **R.** 20 East

Conditions of Approval

1. General

   Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

   Notify the Division within 24 hours of spudding the well.

   - Contact Carol Daniels at (801) 538-5284.

   Notify the Division prior to commencing operations to plug and abandon the well.

   - Contact Dustin Doucet at (801) 538-5281 office (801) 733-0983 home

3. Reporting Requirements

   All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

5. In accordance with Order in Cause No. 190-5(b) dated October 28, 1982, the Operator shall comply with requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operator shall ensure that the surface and/or production casing is properly cemented over the entire oil shale interval as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the Division.

API Well No: 43047405400000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-144867A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 920-20D

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047405400000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6007 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0646 FNL 0686 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 20 Township: 09.0S Range: 20.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 3/2/2010	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SPUD REPORT Date of Spud:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ DRILLING REPORT Report Date:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: March 01, 2010

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Danielle Piernot	720 929-6156	Regulatory Analyst
SIGNATURE N/A		**DATE** 2/25/2010

RECEIVED February 25, 2010

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047405400000

API: 43047405400000
Well Name: NBU 920-20D
Location: 0646 FNL 0686 FWL QTR NWNW SEC 20 TWNP 090S RNG 200E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 3/2/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Approved by the Utah Division of Oil, Gas and Mining

Signature: Danielle Piernot **Date:** 2/25/2010
Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date: March 01, 2010

By:

RECEIVED February 25, 2010

API Well No: 43047405400000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-144867A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 920-20D

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047405400000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6515 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0646 FNL 0686 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 20 Township: 09.0S Range: 20.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 3/1/2011	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SPUD REPORT Date of Spud:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ DRILLING REPORT Report Date:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: 03/01/2011

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Danielle Piernot	720 929-6156	Regulatory Analyst
SIGNATURE		**DATE**
N/A		3/1/2011

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047405400000

API: 43047405400000
Well Name: NBU 920-20D
Location: 0646 FNL 0686 FWL QTR NWNW SEC 20 TWNP 090S RNG 200E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 3/2/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

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- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Signature: Danielle Piernot **Date:** 3/1/2011
Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED Mar. 01, 2011

Form 3160-3
(August 2007)

FORM APPROVED
OMB NO. 1004-0137
Expires: July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FEB 17 2009

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. UTU-144867A 0144867A

6. If Indian, Allottee or Tribe Name: Ute Tribe

1a. Type of Work: [X] DRILL [ ] REENTER

7. If Unit or CA Agreement, Name and No.: 891008900A

1b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [ ] Single Zone [X] Multiple Zone

8. Lease Name and Well No.: NBU 920-20D

2. Name of Operator: Kerr-McGee Oil & Gas Onshore, LP

9. API Well No.: 43-047-40540

3a. Address: PO Box 173779, Denver, CO 80217-3779

3b. Phone No. *(include area code)*: Raleen White 720-929-6666

10. Field and Pool, or Exploratory: Natural Buttes Field

4. Location of well *(Report location clearly and In accordance with any State requirements.*)* NAD 83
At surface: 646' FNL 686' FWL NW/4 NW/4 Lat. 40.02632 Long. -109.69785
At proposed prod. zone

11. Sec.,T.,R.,M.,or Blk.and Survey or Area: 20 T 9S R 20E S.L.B. & M.

14. Distance in miles and direction from the nearest town or post office*: Approximately 36 miles south of Vernal, Utah

12. County or Parish: Uintah

13. State: Utah

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
646'	40.00	Unit well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/ BIA Bond No. on file**
±1,000'	11,000'	WYB000291
21. Elevations (Show whether DF. RT, GR, etc.)	**22. Aproximate date work will start***	**23. Estimated duration**
4,810 ' GR KB	ASAP	10 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1 shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by existing bond on file(see item 20 above).
5. Operator certification.
6. Such other site specific information and/ or plans as may be required by the a authorized officer.

25. Signature	Name *(Printed/ Typed)*	Date
Raleen White	Raleen White	2-13-2009
Title: Sr Regulatory Analyst	E-mail: raleen.white@anadarko.com Phone: 720-929-6666	
Approved By *(Signature)*	Name *(Printed/ Typed)* Jerry Kenczka	Date JUN 21 2011
Title: Assistant Field Manager Lands & Mineral Resources	Office: VERNAL FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RECEIVED
JUL 11 2011
DIV. OF OIL, GAS & MINING

* *(Instructions on page 2)*

NOS APD Posted 02/19/09

UDOGM

NOTICE OF APPROVAL

AFMSS# 09JM0184A

CONDITIONS OF APPROVAL ATTACHED

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE
170 South 500 East VERNAL, UT 84078 (435) 781-4400

CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	**Kerr McGee Oil & Gas Onshore LP**	**Location:**	**NWNW, Sec. 20, T9S R20E**
Well No:	**NBU 920-20D**	**Lease No:**	**UTU-0144867A**
API No:	**43-047-40540**	**Agreement:**	**Natural Buttes Unit**

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

NOTIFICATION REQUIREMENTS

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: ut_vn_opreport@blm.gov.
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

SURFACE USE PROGRAM
CONDITIONS OF APPROVAL (COAs)

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.

- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO_x per horsepower-hour.

Site-Specific Conditions of Approval:

- Paint facilities "Shadow Gray."

- Construct a low-water crossing on the access road at drainage.

- Use pit run/gravel on well pad for support.

- Anchor the pipeline that leaves the well pad on the south side at corner 4 before it turns downslope.

- Conduct a raptor survey prior to initiating any surface disturbing activity, including construction of the propose location, pipeline, or access road or drilling or completion operation if any such operation would take place during the raptor nesting season (January 1 through September 30). If an active raptor nest is identified during a survey, conduct the construction , drilling , and/or completion operation according to the seasonal restrictions detailed in the Uinta Basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines (See Appendix D).

- Conduct a new biological survey in accordance with the guidelines specified in the USFWS Rare Plant Conservation Measures for Uinta Basin hookless cactus and the 2008 BLM RMP ROD, to include a 300-foot buffer from proposed construction operations (See Appendix D), and conduct operations according to agency specifications and the requirements of the BO issued a result for Section 7 USFWS consultation.

BIA Standard Conditions of Approval:

- Soil erosion will be mitigated by reseeding all disturbed areas.

- The gathering pipelines will be constructed to lie on the surface. The surface pipelines will not be bladed or cleared of vegetation. Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the right-of-way. Where pipelines do not parallel roads but cross-country between sites, they shall be welded in place at well sites or on access roads and then pulled between stations with a suitable piece of equipment. Traffic will be restricted along these areas so that the pipeline right-of-way will not be used as an access road.

- An open drilling system shall be used, unless otherwise specified in 10.0 Additional Stipulations of this document and in the Application for Permit to Drill. A closed drilling system shall be used

in all flood plain areas, and other highly sensitive areas, recommended by the Ute Tribe Technician, BIA, and other agencies involved.

- The reserve pit shall be lined with a synthetic leak proof liner. After the drilling operation is complete, excess fluids shall be removed from the reserve pit and either hauled to an approved disposal site or shall be used to drill other wells. When the fluids are removed the pit shall be backfilled a minimum of 3.0' below the soil surface elevation.

- A closed production system shall be used. This means all produced water and oil field fluid wastes shall be contained in leak proof tanks. These fluids shall be disposed of in either approved injection wells or disposal pits.

- Major low water crossings will be armored with pit run material to protect them from erosion.

- All personnel should refrain from collecting any paleontological fossils and from disturbing any fossil resources in the area.

- If fossils are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.

- Before the site is abandoned the company will be required to restore the right-of-way to near its original state. The disturbed area will be reseeded with desirable perennial vegetation. If necessary, the Bureau of Indian Affairs or Bureau of Land Management will provide a suitable seed mixture.

- Noxious weeds will be controlled on all surface disturbances within the project area. If noxious weeds spread from the project area onto adjoining land, the company will also be responsible for their control.

- If project construction operations are scheduled to occur after December 31, 2009, KMG should conduct annual raptor surveys in accordance with the guidelines specified in the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002. If active raptor nest are indentified during a new survey, KMG should conduct its operations according to the seasonal restrictions detailed in the Uinta basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Gui9ldlines (See Appendix D).

- USFWS threatened and endangered plant and animal conservation measures will be followed, as appropriate to the species identified by the biological resource survey (See Appendix D).

- All personnel should refrain from collecting artifacts and from disturbing any significant cultural resources in the area.

- If artifacts or any culturally sensitive materials are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.

DOWNHOLE PROGRAM
CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

- Surface casing cement shall be brought up and into the surface. Top of Cement is to reach surface.For surface casing cement program, to reach surface with Top of Cement, operator is required to pump additional cement beyond the stated amounts in application.

- The operator must notify any active gilsonite operation located within 2 miles of the location 48 hours prior to any surface blasting for this well.

- Conductor casing shall be set into competent formation.

  toc_1800_operDrlgPlan#4
  CsgSurf_set_2700 to 2800
  KerrMcGee apd_coa Downhole

- Production casing cement shall be brought up and into the surface casing. Production casing minimum cement top is 1800 ft. The minimum cement top is approximately 0700 ft above the surface casing shoe.
  Cement Top (TOC) standard will place cement behind casing across formation lost circulation zone, Birds Nest Zone.Surface casing setting depth stated in APD is 2700 to 2800 ft.COA specification fulfills operators performance standard stated in APD (where operators toc is calculated with an excess to reach surface).

- Operator is to notify BLM Vernal Field Office and active gilsonite mining operator (or lease holder) located within a 2 mile radius, 48 hours prior to pad explosives blasting. Well is not close to gilsonite vein, but on trend to gilisonite vein deposits.

- A copy of Kerr McGee's Standard Operating Practices (SOP version: dated 7/17/08 and approved 7/28/08) shall be on location.

- Drilling plan specifics and practices are referenced in the Kerr McGee Oil & Gas Standard Operating Procedures (SOP version: July 28, 2008). The operators drilling plan items 3 to 9 reference the SOP. Kerr McGee shall adhere to the referenced requirements in the SOP. Kerr McGee and their contractors shall adhere to all Oil and Gas rules and requirements listed in the Code of Federal Regulations and all Federal Onshore Oil and Gas Orders except where variances have been granted.

- Covering air/gas drilling operations, requirements will be adhered to covering air/gas drilling operations as described in Onshore Order #2 III. E. 1. Drilling Operations, Special Drilling Operations, air/gas drilling.

- A Gamma Ray well Log shall be run from the well Total Depth to the surface.
  A copy of the Gamma Ray well Log shall be submitted to the BLM Vernal Field Office.

- A variance is granted for Onshore Order #2 Drilling Operations III. E. "Blooie line discharge 100 feet from well bore and securely anchored" Blooie line can be 45 feet.
  All requirements will be adhered to covering air/gas drilling operations as described in Onshore Order #2 III. E. 1. Drilling Operations, Special Drilling Operations, air/gas drilling.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.

- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

- **Please submit an electronic copy of all other logs run on this well in LAS format to UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**

- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.

- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:

    - Operator name, address, and telephone number.

    - Well name and number.

    - Well location (¼¼, Sec., Twn, Rng, and P.M.).

    - Date well was placed in a producing status (date of first production for which royalty will be paid).

    - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).

    - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.

    - Unit agreement and/or participating area name and number, if applicable.

    - Communitization agreement number, if applicable.

- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.

- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if

performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.

- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.

- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.

- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.

- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.

- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.

- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

Federal Approval of this Action is Necessary

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

5.LEASE DESIGNATION AND SERIAL NUMBER:
UTU-144867A

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
UTE

7.UNIT or CA AGREEMENT NAME:
NATURAL BUTTES

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
NBU 920-20D

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047405400000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6515 Ext

9. FIELD and POOL or WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0646 FNL 0686 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: NWNW Section: 20 Township: 09.0S Range: 20.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 10/27/2011	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	✓ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	✓ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator requests approval to change the total depth to include the Blackhawk formation. This request also includes changes to the production casing program to Ultra DQX/LTC, and the drilling program to allow for the use of a Closed Loop system (please refer to page 8 in the attachment). Included in the attached drilling plan you will find a request for a variance for FIT requirements (please refer to page 4 in the attachment). Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: 11/23/2011

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE		**DATE**
N/A		10/27/2011

RECEIVED Oct. 27, 2011

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 920-20D

Surface: 646 FNL / 686 FWL NWNW

Section 20 T9S R20E

Unitah County, Utah
Mineral Lease: UTU-0144867A

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. & 2. **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Formation	Depth	Resource
Uinta	0 - Surface	
Green River	1,816'	
Birds Nest	2,054'	Water
Mahogany	2,555'	Water
Wasatch	5,284'	Gas
Mesaverde	8,767'	Gas
Sego	11,035'	Gas
Castlegate	11,184'	Gas
MN5	11,461'	Gas
TVD	12,061'	
TD	12,061'	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

RECEIVED Oct. 27, 2011

5. Drilling Fluids Program:

Please refer to the attached Drilling Program

6. Evaluation Program:

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 12061' TVD, approximately equals 7,960 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 5,362 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Drilling Program.
Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements
Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements
KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

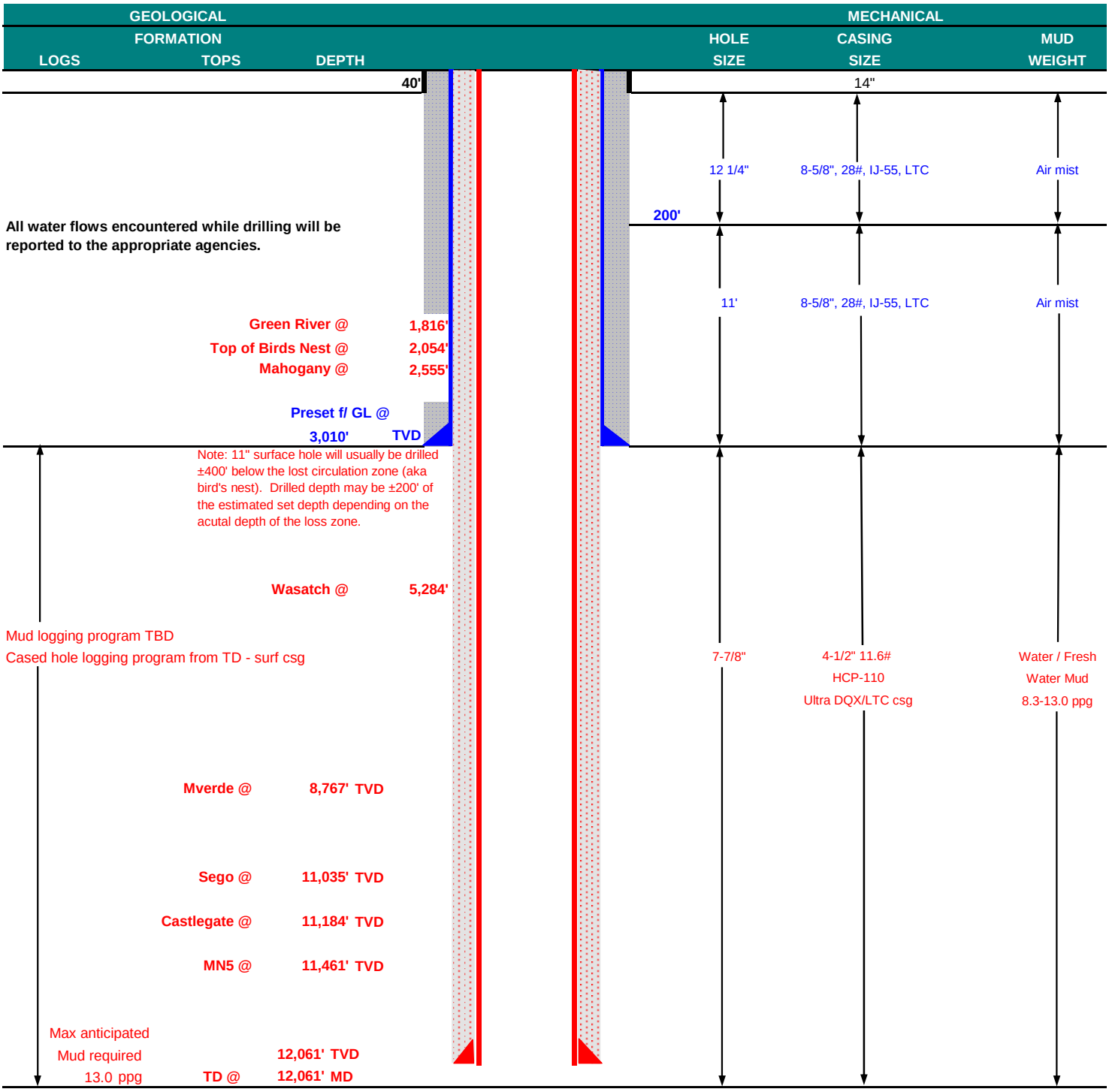
10. Other Information:

Please refer to the attached Drilling Program.

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	October 27, 2011
WELL NAME	**NBU 920-20D**			TD	12,061' TVD 12,061' MD
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah		FINISHED ELEVATION 4,810'
SURFACE LOCATION	NWNW 646 FNL 686 FWL	Sec 20	T 9S	R 20E	
	Latitude: 40.026320	Longitude: -109.697850			NAD 83
OBJECTIVE ZONE(S)	BLACKHAWK				
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BIA (Surface), UDOGM Tri-County Health Dept.				



NBU 920-20D

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION LTC	TENSION DQX
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	3,010	28.00	IJ-55	LTC	1.79	1.33	4.72	N/A
								10,690	8,650	279,000	367,000
PRODUCTION	4-1/2"	0	to	5,000	11.60	HCP-110	DQX	1.19	1.06		3.27
	4-1/2"	5,000	to	12,061'	11.60	HCP-110	LTC	1.19	1.06	4.25	

Surface Casing:

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**				
Option 2	LEAD	2,510'	65/35 Poz + 6% Gel + 10 pps gilsonite	230	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,781'	Premium Lite II +0.25 pps	380	35%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	7,280'	50/50 Poz/G + 10% salt + 2% gel	1,720	35%	14.30	1.31
			+ 0.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: _____ **DATE:** _____

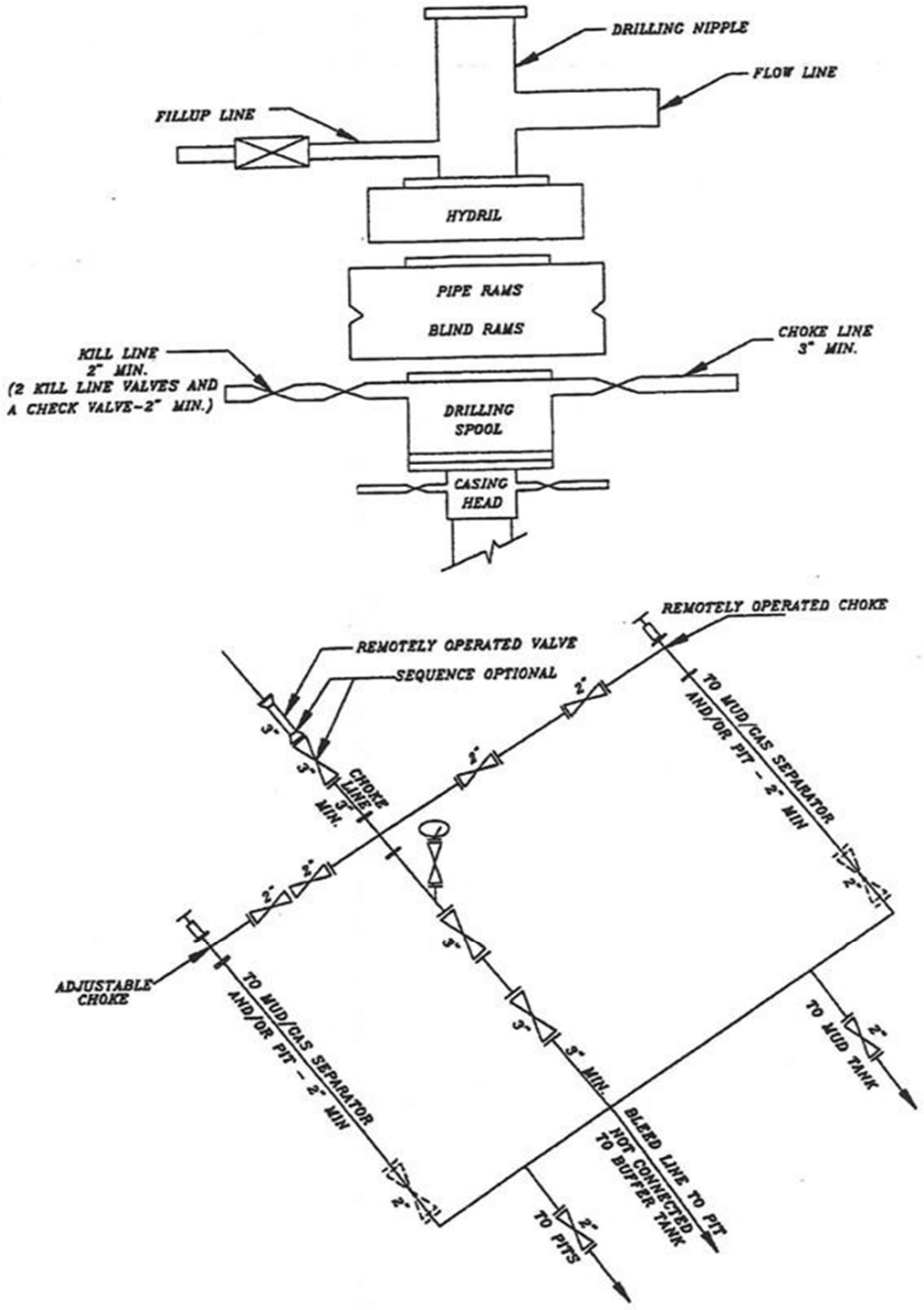
Nick Spence / Danny Showers / Chad Loesel

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

RECEIVED Oct. 27, 2011

EXHIBIT A
NBU 920-20D



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

RECEIVED Oct. 27, 2011

Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

RECEIVED Oct. 27, 2011

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
UTU-144867A

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
UTE

7.UNIT or CA AGREEMENT NAME:
NATURAL BUTTES

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
NBU 920-20D

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047405400000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6515 Ext

9. FIELD and POOL or WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0646 FNL 0686 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: NWNW Section: 20 Township: 09.0S Range: 20.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ SPUD REPORT Date of Spud: 12/12/2011	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON 12/12/2011 AT 0900 HRS.

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Sheila Wopsock	435 781-7024	Regulatory Analyst
SIGNATURE		**DATE**
N/A		12/13/2011

SUBMIT AS EMAIL | Print Form

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By SHEILA WOPSOCK Phone Number 435.781.7024
Well Name/Number NBU 920-20D
Qtr/Qtr NW/NW Section 20 Township 9S Range 20E
Lease Serial Number UTU-0144867A
API Number 4304740540

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 12/12/2011 0800 HRS AM ☑ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☑ Surface Casing
- ☐ Intermediate Casing
- ☐ Production Casing
- ☐ Liner
- ☐ Other

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DEC 13 2011
DIV. OF OIL, GAS & MINING

Date/Time 01/05/2012 0800 HRS AM ☑ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

Date/Time _____ _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT ~~LOVEL YOUNG AT 435.781.7051 FOR MORE~~

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP
Operator Account Number: N 2995
Address: 1368 SOUTH 1200 EAST
city VERNAL
state UT zip 84078
Phone Number: (435) 781-7024

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304740540	NBU 920-20D		NWNW	20	9S	20E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	3900	12/12/2011			12/28/11	

Comments: MIRU PETE MARTIN BUCKET RIG. BLKHK = MVRD = WSMVD
SPUD WELL ON 12/12/2011 AT 0900 HRS.

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	

Comments:

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	

Comments:

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

SHEILA WOPSOCK
Name (Please Print)
Signature
REGULATORY ANALYST
Title
12/13/2011
Date

RECEIVED
DEC 13 2011
DIV. OF OIL, GAS & MINING

(5/2000)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-144867A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 920-20D

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047405400000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 **PHONE NUMBER:** 720 929-6526

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0646 FNL 0686 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 20 Township: 09.0S Range: 20.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 1/15/2012	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU AIR RIG ON JAN. 13, 2012. DRILLED SURFACE HOLE TO 3064'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
January 17, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE N/A		**DATE** 1/17/2012

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-144867A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 920-20D

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047405400000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 **PHONE NUMBER:** 720 929-6515

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0646 FNL 0686 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 20 Township: 09.0S Range: 20.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 2/16/2012	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU ROTARY RIG. FINISHED DRILLING FROM 3,064' TO 12,061' ON FEBRUARY 13, 2012. RAN 4-1/2" 11.6# P-110 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED SST 54 RIG ON FEBRUARY 16, 2012 @ 18:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
February 21, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE N/A		**DATE** 2/17/2012

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-144867A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 920-20D

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047405400000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6526

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0646 FNL 0686 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 20 Township: 09.0S Range: 20.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 3/13/2012	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	✓ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 03/13/2012 AT 1400 HRS. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
March 16, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Sheila Wopsock	435 781-7024	Regulatory Analyst
SIGNATURE		**DATE**
N/A		3/14/2012

RECEIVED: Mar. 14, 2012

FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
UTU-144867A

SUNDRY NOTICES AND REPORTS ON WELLS

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6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
UTE

7.UNIT or CA AGREEMENT NAME:
NATURAL BUTTES

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
NBU 920-20D

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047405400000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6515

9. FIELD and POOL or WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0646 FNL 0686 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: NWNW Section: 20 Township: 09.0S Range: 20.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 11/9/2012	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	✓ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator requests approval to abandon the existing Mesaverde formation. The operator plans to recomplete the well in the future, and will submit a sundry for this subsequent work. Please see the attached procedure. Thank you.

Accepted by the Utah Division of Oil, Gas and Mining

Date: November 15, 2012

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE		**DATE**
N/A		11/9/2012

RECEIVED: Nov. 09, 2012

Greater Natural Buttes Unit

NBU 920-20D

PLUGBACK PROCEDURE
BLACKHAWK FORMATION

DATE: 11/06/2012
AFE#: 2029052
API#: 4304740540
USER ID: WIU473 (Frac Invoices Only)

COMPLETIONS ENGINEER: **Patricia Cuba, Denver, CO**
(720) 929-6348 (Office)
(303) 601-7259 (Cell)

REMEMBER SAFETY FIRST!

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Name: **NBU 920-20D**
Location: **NW NW Sec 20 R9S R20E**
LAT: 40.02632 **LONG:** -109.69785 **COORDINATE:** NAD83 *(Surface Location)*
Uintah County, UT
Date: **11/06/2012**

ELEVATIONS: 4810' GL 4828' KB *Frac Registry TVD: 12057'*

TOTAL DEPTH: 12061' **PBTD:** 12016'
SURFACE CASING: 8 5/8", 28# J-55 LTC @ 3024'
PRODUCTION CASING: 4 1/2", 11.6#, P-110 DQX LTC @ 5028'
4 1/2", 11.6#, P-110 LTC @ 5028-12061'
Marker Joint **5028-5041, 8689-8708, and 11378-11398**'

TUBULAR PROPERTIES:

	BURST (psi)	COLLAPSE (psi)	DRIFT DIA. (in.)	CAPACITIES	
				(bbl./ft)	(gal/ft)
2 3/8" 4.7# N-80 tbg	11,200	11,780	1.901"	0.00387	0.1624
4 ½" 11.6# I-80 (See above)	7780	6350	3.875"	0.0155	0.6528
4 ½" 11.6# P-110	10691	7580	3.875"	0.0155	0.6528
2 3/8" by 4 ½" Annulus				0.0101	0.4227

TOPS: **BOTTOMS:**

1730' Green River Top
1908' Bird's Nest Top
2449' Mahogany Top
5306' Wasatch Top 8987' Wasatch Bottom
8987' Mesaverde Top 12061' Mesaverde Bottom (TD)

T.O.C. @ 2500'
Hydraulic isolation estimated at **2558'** based upon from Schlumberger's CBL dated 02/29/2012 **.**

GENERAL:

- Procedure calls for **1** CIBP's (**10,000** psi) .
- Originally completed on 3/9/12
- Tubing landed @ 11714'
- **Plug calculations are based on Class G cement with No Bentonite. Adjust the cement slurry volumes if a different cement type will be used.**

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Existing Perforations (from OpenWells):

PERFORATIONS							
Formation	Zone	Top	Btm	spf	Shots	Date	Reason
MESAVERDE	LOWER	11462	11464	3	6	03/08/2012	PRODUCTION
MESAVERDE	LOWER	11478	11479	3	3		PRODUCTION
MESAVERDE	LOWER	11486	11487	3	3		PRODUCTION
MESAVERDE	LOWER	11503	11507	3	12		PRODUCTION
MESAVERDE	LOWER	11577	11579	3	6		PRODUCTION
MESAVERDE	LOWER	11628	11630	3	6		PRODUCTION
MESAVERDE	LOWER	11641	11643	3	6	03/08/2012	PRODUCTION
MESAVERDE	LOWER	11658	11660	3	6		PRODUCTION
MESAVERDE	LOWER	11718	11720	3	6		PRODUCTION
MESAVERDE	LOWER	11737	11738	3	3		PRODUCTION
MESAVERDE	LOWER	11748	11750	3	6		PRODUCTION
MESAVERDE	LOWER	11761	11763	3	6	03/08/2012	PRODUCTION
MESAVERDE	LOWER	11827	11828	3	3	03/08/2012	PRODUCTION

Relevant History:

2/16/2012: New drill, cemented w/ Class G Premium Lite (Lead) and Class G 50/50 POZ-Mix (Tail).

3/9/2012: Completed in Blackhawk Formation (Discrete Balckhawk test, see perfs above).

10/15/2012: Well had been logged off for a few weeks due to high water production. During this time, casing pressure built up to 3600 psi. Cycling these high pressures on the casing has the potential to result in a failure like what occurred on the 35L1CS which resulted in a 600 BBL spill. According to the well P&L's the EBITDA for this well is -$40,000 YTD. Leaving this well until next year to be recompleted will result in a larger negative cash flow as well as potential EH&S concern.

H2S History:

Production Date	Gas (avg mcf/day)	Water (avg bbl/day)	Oil (avg bbl/day)	LGR (bbl/Mmcf)	Max H2S Seperator (ppm)
2/29/2012	0.00	0.00	0.00	#NA	
3/31/2012	452.32	107.74	0.13	238.48	
4/30/2012	349.07	178.60	0.70	513.66	3.00
5/31/2012	226.84	114.45	1.32	510.38	1.00
6/30/2012	152.57	68.57	0.67	453.79	
7/31/2012	126.71	47.32	0.35	376.27	
8/31/2012	82.90	39.03	0.48	476.65	
9/30/2012	51.23	30.47	0.13	597.27	

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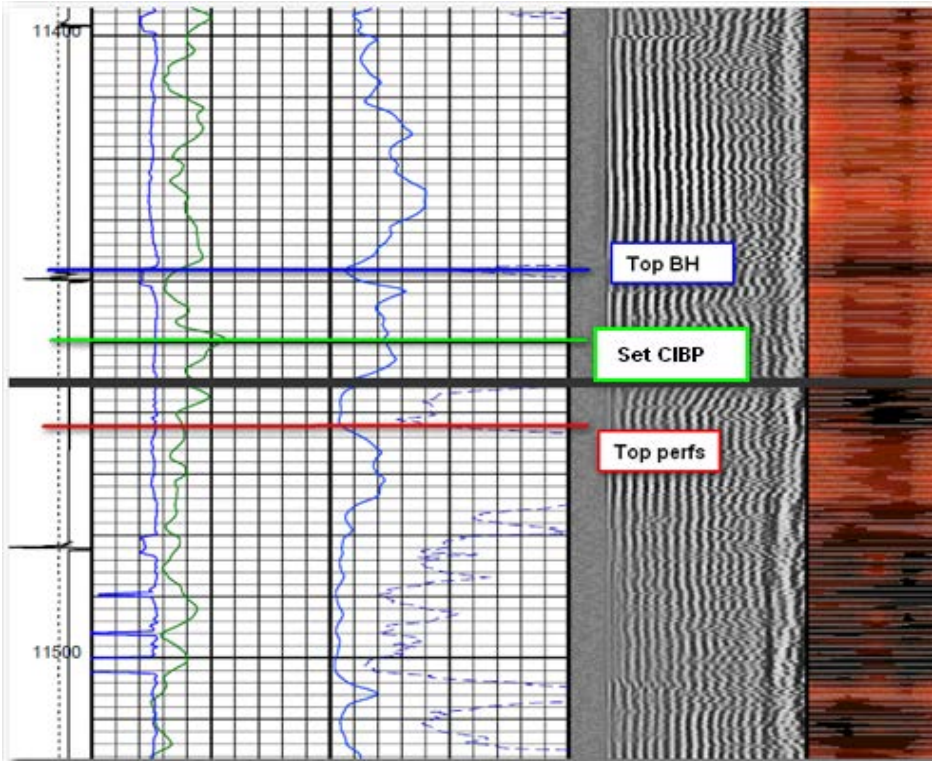
PROCEDURE:

NOTE: **Given the proximity of the top perforations and the top of the Blackhawk formation (~23'), only one isolation plug (CIBP + 100' cement plug on top) is considered for isolation.**

1. MIRU. Control well with recycled water and biocide as required. ND WH, NU and test BOPE.

2. POOH w/tubing. Visually inspect for scale and consider replacing tubing if needed.

3. **PLUG - ISOLATE BLACKHAWK PERFORATIONS (11462' – 11718' and PROTECT TOP OF BLACKHAWK (11439'):** RIH W/ 4 ½" CIBP. SET @ ~ 11450' (~12' above top perfs). Release CIBP, PUH 10', break circulation with fresh water. Pressure test casing to **6200 psi**. Inform engineering if it doesn't test. Displace a minimum of **13 SX/ 1.6 BBL/ 8.7 CUFT** of cement on top of plug. PUH above TOC (~11350', equivalent to 100' COVERAGE). REVERSE CIRCULATE W/ TREATED FRESH WATER.



4. ND BOPs.

For design questions, please call
Patricia Cuba, Denver, CO
(720) 929-6348 (Office) (303) 601-7259 (Cell)

For field implementation questions, please call
Jeff Samuels, Vernal, UT
(435)-781-7046 (Office)

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Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. UTU0144867A

1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other _____

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No. UTU63047A

2. Name of Operator KERR MCGEE OIL & GAS ONSHORE LP — Contact: JAIME L. SCHARNOWSKE — E-Mail: JAIME.SCHARNOWSKE@ANADARKO.COM

8. Lease Name and Well No. NBU 920-20D

3. Address PO BOX 173779 DENVER, CO 80217

3a. Phone No. (include area code) Ph: 720-929-6304

9. API Well No. 43-047-40540

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

At surface NWNW 646FNL 686FWL 40.026320 N Lat, 109.697850 W Lon

At top prod interval reported below NWNW 646FNL 686FWL 40.026320 N Lat, 109.697850 W Lon

At total depth NWNW ~~646~~ 624 FNL ~~686~~ 758 FWL 40.026320 N Lat, 109.697850 W Lon BHL by HSM

10. Field and Pool, or Exploratory NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey or Area Sec 20 T9S R20E Mer SLB

12. County or Parish UINTAH — 13. State UT

14. Date Spudded 12/12/2011

15. Date T.D. Reached 02/13/2012

16. Date Completed ☐ D & A ☒ Ready to Prod. 03/13/2012

17. Elevations (DF, KB, RT, GL)* 4810 GL

18. Total Depth: MD 12061 TVD 12057

19. Plug Back T.D.: MD 12017 TVD 12013

20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
CBL/CMI/GR/CCL-BHV-ULTRA SLIM SD/DSN/ACTR

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ~~☒ No~~ ☒ Yes (Submit analysis)

23. Casing and Liner Record *(Report all strings set in well)*

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7	0	40		28			
11.000	8.625 IJ-55	28.0	0	3024		690		0	
7.875	4.500 P-110	11.6	0	12061		2267		2500	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	11349							

25. Producing Intervals / 26. Perforation Record

	Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A)	MESAVERDE	11462	11828	11462 TO 11828	0.360	72	OPEN
B)							
C)							
D)							

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
11462 TO 11828	PUMP 12,419 BBLS SLICK H2O & 317,321 LBS 30/50 OTTAWA SAND

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28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
03/13/2012	03/17/2012	24	→	0.0	1313.0	600.0			FLOWS FROM WELL

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
20/64	4142	4096.0	→	0	1313	600		PGW

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #135355 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

29. Disposition of Gas *(Sold, used for fuel, vented, etc.)*
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				GREEN RIVER	1730
				BIRD'S NEST	1908
				MAHOGANY	2449
				WASATCH	5306
				MESAVERDE	8987

32. Additional remarks (include plugging procedure):
The first 210?of the surface hole was drilled with a 12 ?? bit. The remainder of surface hole was drilled with an 11? bit. DQX csg was run from surface to 5028?; LTC csg was run from 5028? to 12,061?. Attached is the chronological well history, perforation report & final survey.

33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.)
2. Geologic Report
3. DST Report
4. Directional Survey
5. Sundry Notice for plugging and cement verification
6. Core Analysis
7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #135355 Verified by the BLM Well Information System.
For KERR MCGEE OIL & GAS ONSHORE,L, sent to the Vernal

Name *(please print)* JAIME L. SCHARNOWSKE Title REGULATORY ANALYST

Signature (Electronic Submission) Date 04/13/2012

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fradulent statements or representations as to any matter within its jurisdiction.

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

US ROCKIES REGION

Operation Summary Report

Well: NBU 920-20D			Spud Date: 1/13/2012
Project: UTAH-UINTAH	Site: NBU 920-20D		Rig Name No: PROPETRO 11/11, SST 54/54
Event: DRILLING	Start Date: 11/10/2011		End Date: 2/16/2012
Active Datum: RKB @4,828.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/13/2012	11:30 - 15:30	4.00	MIRU	01	A	P		MOVE RIG ONTO LOCATION F/NBU 921-21A3DS
	15:30 - 21:00	5.50	PRPSPD	01	B	P		(WELL 1/1). INSTALL DIVERTOR HEAD AND BLUEY LINE. BUILD DITCH. SPOT IN RIG. SPOT IN CATWALK AND PIPE RACKS. RIG UP PIT PUMP. RIG UP PUMP. PRIME PUMP. INSPECT RIG. HELD PRE-SPUD SAFETY MEETING.
	21:00 - 22:00	1.00	PRPSPD	08	A	Z		WORK ON PUMP
	22:00 - 23:00	1.00	DRLSUR	01	B	P		P/U MOTOR & 12 1/4 BIT SPUD 01/13/2012 @ 23:00
	23:00 - 0:00	1.00	DRLSUR	02	B	P		DRILL 12.25" HOLE 44'- 127'. (83', 83'/HR) RPM=45, WOB 5-15K. PSI ON/OFF 600/400. UP/DOWN/ ROT 20/20/20 K. DRAG 0 K. CIRC RESERVE W. 8.3# WATER. DRILL DOWN TO 127' W/ 6" COLLARS.
1/14/2012	0:00 - 1:00	1.00	DRLSUR	02	B	P		DRILL 12.25" HOLE 127'-210'. (83', 83'/HR) RPM=45, WOB 5-15K. PSI ON/OFF 600/400. UP/DOWN/ ROT 20/20/20 K. DRAG 0 K. CIRC RESERVE W. 8.3# WATER. DRILL DOWN TO 210' W/ 6" COLLARS.
	1:00 - 3:30	2.50	DRLSUR	06	A	P		POOH, PU, 11" BIT AND DIRECTIONAL TOOLS, TIH T/ 210'
	3:30 - 7:00	3.50	DRLSUR	02	B	P		DRILL F/210 T/730 (520' @ 148' PER HR) WOB 20K, PSI ON/OFF 900/780, RPM 50 UP/DWN/ROT 55/49/50
	7:00 - 8:00	1.00	DRLSUR	08	A	Z		WORK ON PUMP
	8:00 - 10:00	2.00	DRLSUR	02	B	P		DRILL F/730-930' (200' @ 100' PER HR) WOB 20K, PSI ON/OFF 900/780, RPM 50 UP/DWN/ROT 55/49/50
	10:00 - 10:30	0.50	DRLSUR	08	A	Z		WORK ON PUMP
	10:30 - 0:00	13.50	DRLSUR	02	B	P		DRILL F/930-2440' (1510' @ 111.85' PER HR) WOB 20K, PSI ON/OFF 1650/1450, RPM 74 UP/DWN/ROT 80/70/72
1/15/2012	0:00 - 8:00	8.00	DRLSUR	02	B	P		DRILL F/2440'-3064' (624' @ 78' PER HR) WOB 20K, PSI ON/OFF 1650/1450, RPM 74 UP/DWN/ROT 80/70/72
	8:00 - 10:00	2.00	DRLSUR	05	D	P		CIRC F/CSNG
	10:00 - 14:30	4.50	DRLSUR	06	D	P		LDDS, BHA & DIR. TOOLS
	14:30 - 15:30	1.00	DRLSUR	12	A	P		MOVE PIPE RACKS AND CATWALK. PULL DIVERTER HEAD. RIG UP TO RUN CSG. AND MOVE CSG INTO POSITION TO P/U
	15:30 - 18:30	3.00	DRLSUR	12	C	P		RUN 54 JTS 8 5/8, 28# CSNG., SHOE SET @ 3010', BAFFLE SET @ 2964.12'
	18:30 - 19:30	1.00	DRLSUR	12	B	P		HOLD SAFETY MEETING, RUN 200' OF 1". RIG DOWN RIG MOVE OFF WELL, REBUILD DITCH. RIG UP CEMENT TRUCK, 2" HARD LINES,. CEMENT HEAD, LOAD PLUG. LAND CSNG @ 18:30

Operation Summary Report

Well: NBU 920-20D			Spud Date: 1/13/2012
Project: UTAH-UINTAH	Site: NBU 920-20D		Rig Name No: PROPETRO 11/11, SST 54/54
Event: DRILLING	Start Date: 11/10/2011		End Date: 2/16/2012
Active Datum: RKB @4,828.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	19:30 - 21:30	2.00	DRLSUR	12	E	P		PRESSURE TEST LINES TO 2000 PSI. PUMP 170 BBLS OF WATER AHEAD. PUMP 20 BBLS OF 8.3# GEL WATER AHEAD. PUMP 240 SKS (163.2 BBLS)OF 11.0# 3.82 YD 23 GAL/SK PREMIUM CEMENT. PUMP 170 SX TAIL (34.8 BBLS),15.8#, 1.15 YIELD. DROP PLUG ON FLY. DISLPACE WITH 184.9 BBLS OF H20. FULL CIRC THROUGHOUT. FINAL LIFT 650 PSI AT 4 BBLS MIN. BUMP PLUG WITH 850 PSI HELD FOR 5 MIN. FLOAT HELD. PUMP 150 SX (30.7 BBLS) OF SAME TAIL CEMENT WITH 2% CACL DOWN 1". SHUT DOWN AND CLEAN TRUCK. CEMENT TO SURFACE.. FELL BACK
	21:30 - 22:30	1.00	DRLSUR	13	A	P		WOC RELEASE RIG 22:30
	22:30 - 22:30	0.00	DRLSUR	12	E	P		PUMP 130 SKS (26.6BBLS) DOWN BACKSIDE. CMT TO SURFACE. STAYED
2/1/2012	14:00 - 20:00	6.00	RDMO	01	E	P		RIG DOWN TOP DRIVE,LOAD OUT AND MOVE TO NEW LOCATION,LAY DOWN DERRICK,PREPARE FOR TRUCKS,MOVE CAMP & RIG UP ON NEW LOCATION.WITH MTN. WEST, ONE WEST ROCK TRUCK ON LOCATION FOR TOP DRIVE.
	20:00 - 0:00	4.00	RDMO	01	E	P		TEAR DOWN,PREPARE FOR TRUCKS@ 07:00 2/2/12 WEST ROCK TRUCKING.
2/2/2012	0:00 - 7:00	7.00	DRLPRO	01	E	P		RIG DOWN,PREPARE FOR TRUCKS, TRUCKS ON LOCATION@ 07:00
	7:00 - 7:30	0.50	DRLPRO	01	E	P		SAFETY MEETING W/ ALL PERSONNEL
	7:30 - 18:30	11.00	DRLPRO	01	E	P		RIG DOWN,LOAD OUT MOVE TO NEW LOCATION,RIG UP,SET ALL GROUND SUPPORT,SUB,DRAWWORKS,RIG MOVE 100% RIG UP 75%,TOTAL TRUCKS ON RIG MOVE 13 HAUL TRUCKS,6 BED TRUCKS,AND ONE CRAN, 46 LOADS, RELEASE 11 HAUL TRUCKS, 5 BED TRUCKS, DERRICK ON LOCATION READY TO SET ON FLOOR IN AM.
	18:30 - 0:00	5.50	DRLPRO	21	A	P		W/O/DAYLIGHT
2/3/2012	0:00 - 7:00	7.00	DRLPRO	21	B	P		W/O/DAYLIGHT
	7:00 - 7:30	0.50	DRLPRO	01	B	P		SAFETY MEETING W/ ALL PERSONNEL
	7:30 - 11:30	4.00	DRLPRO	01	B	P		RIG UP,SET & PIN DERRICK ON RIG FLOOR,RIG UP AND STRING NEW DRILLING LINE,
	11:30 - 14:30	3.00	DRLPRO	01	B	P		RAISE DERRICK JSA W/ WEST ROC TRUCKING, PREPARE AND PICK UP TOP DRIVE
	14:30 - 0:00	9.50	DRLPRO	01	B	P		RIG UP TOP DRIVE , MUD LINES, WINTERIZING RIG
2/4/2012	0:00 - 4:30	4.50	DRLPRO	01	B	P		RIG UP WINTERIZING,TOP DRIVE,PUMPS, MUD LINE,
	4:30 - 6:30	2.00	DRLPRO	14	A	P		NIPPLE UP STRATA FLOW LINE
	6:30 - 7:30	1.00	DRLPRO	14	A			NIPPLE UP BOP, FUNCTION TEST, CHECK FOR HYD. LEEKS, ALL OK
	7:30 - 8:00	0.50	DRLPRO	05	A	P		CIRC. W/ RIG PUMP CHECK FLOW LINE F/ LEEKS, CLOSE BLIND RAMS TEST MUD LINE AND CASING HEAD ADAPTOR 1,000 PSI. MAKE WALK AROUND W/TOOLPUSHER FOR RIG INSPECTION, ALL OKAY: RIG ON DAY WORK@ 08:00 2-4-12
	8:00 - 8:30	0.50	DRLPRO	15	A	P		B&C QUICK TEST ON LOC. SAFETY MEETING JSA WITH ALL PERSONNAL RIG UP SET TEST PLUG

US ROCKIES REGION

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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	8:30 - 14:30	6.00	DRLPRO	15	A	P		TEST BOP 250 LOW & 5000 HIGH, PIPE RAMS & INSIDE VALVES,RAMS OUTSIDE VALVES,CHOKE LINE,CHECK VALVE,INSIDE MANIFOLD VALVES,BLIND RAMS,CHOKE LINE & MANIFOLD VALVES ALL FLOOR VALVES. TEST 250 LOW 3000 HIGH, HYDRILL,STAND PIPE,KELLY HOSE, MUD LINE, TEST STRATA SYSTEM 300 LOW, 2000 HIGH, TEST CASING 1500 PSI. 1/2 HR. GOOD TEST RIG DOWN B&C QUICK TEST.
	14:30 - 15:00	0.50	DRLPRO	07	A	P		INSTALL WEAR BUSHING / SERVICE RIG
	15:00 - 17:00	2.00	DRLPRO	06	A	P		P/U M/U DIRECTIONAL TOOLS & MOTOR TEST MOTOR OK
	17:00 - 18:00	1.00	DRLPRO	06	A	P		SAFETY MEETING RIG UP KIMZEY LAY DOWN MACHINE
	18:00 - 22:30	4.50	DRLPRO	06	A	P		PICK UP HWDP & DRILL PIPE, INSTALL ROT.RUBBER, TAG CEMENT@ 2875
	22:30 - 23:30	1.00	DRLPRO	06	B	P		RIG DOWN L/D MACHINE
	23:30 - 0:00	0.50	DRLPRO	07	C	P		INSTALL TOP DRIVE SAFETY CLAMP ON SAVER SUB HAND DROPPED BOLT IN DRILL PIPE 1/2" X 4" (TRIP OUT F/ BOLT)
2/5/2012	0:00 - 4:30	4.50	DRLPRO	06	H	X		TRIP OUT FOR BOLT, CHECK GAP SUB, FLOAT SUB, MOTOR NO BOLT, ORIENTATE MOTOR,
	4:30 - 6:30	2.00	DRLPRO	06	H	X		TRIP IN RABBIT EACH SRAND FOUND BOLT 11 STDS. OUT RECOVER BOLT FINISH TRIP IN TO 2875 TOP OF CEMENT
	6:30 - 7:30	1.00	DRLPRO	02	F	P		DRILL CEMENT AND FLOAT EQUIP. F/ 2875 TO 3078 SHOE@ 3024 FLOAT PLATE@ 2983 ****SPUD@ 07:30 2/5/12****
	7:30 - 16:00	8.50	DRLPRO	02	B	P		DRLG ROTATE/SLIDE/SURVEY. F/ 3,078 TO 3,835, AROP 89.05, WOB 18K, TDRPM 45 MM RPM 87,TOTAL RPM 132, DIFF. 325 GPM.505 PSI ON/OFF 1,655/ 1465,TORQUE ON/OFF 5785/2845. FLARE 2'
	16:00 - 16:30	0.50	DRLPRO	07	A	P		RIR SERVICE, FUNCTION BOP & C-O-M
	16:30 - 0:00	7.50	DRLPRO	02	B	P		DRLG ROTATE/SLIDE/SURVEY. F/ 3,835, TO 4660, AROP 110, WOB 18/20K, TDRPM 45/50 MM RPM 87,TOTAL RPM 132, DIFF. 325 GPM.505 PSI ON/OFF 1,870/ 1585,TORQUE ON/OFF 6865/3445. FLARE 3'/ 5'
2/6/2012	0:00 - 10:30	10.50	DRLPRO	02	B	P		DRLG ROTATE/SLIDE/SURVEY. F/ 4,660, TO 5,647, AROP 93.4, WOB 18/20K, TDRPM 50 MMRPM 87,TOTAL RPM 132, DIFF. 325 GPM.498 PSI ON/OFF 1,755/ 1,455,TORQUE ON/OFF 6775/4545. FLARE 3'/ 5'
	10:30 - 11:00	0.50	DRLPRO	07	A	P		RIG SERVICE,FUNCTION BOP & C-O-M
	11:00 - 0:00	13.00	DRLPRO	02	B	P		DRLG ROTATE/SLIDE/SURVEY. F/ 5,646, TO 6,917, AROP 97.7, WOB 18/20K, TDRPM 50 MMRPM 87,TOTAL RPM 132, DIFF. 392 GPM.507 PSI ON/OFF 1,880/ 1525,TORQUE ON/OFF 7965/4660. FLARE 3'/ 4'
2/7/2012	0:00 - 14:30	14.50	DRLPRO	02	B	P		DRLG ROTATE/SLIDE/SURVEY. F/ 6,917, TO 7,934, AROP 70.1, WOB 18/20K, TDRPM 50 MMRPM 87,TOTAL RPM 160,DIFF, 278 GPM.502 PSI ON/OFF 1,825/ 1435,TORQUE ON/OFF 6900/4555. FLARE 3'/ 4'

Operation Summary Report

Well: NBU 920-20D			Spud Date: 1/13/2012
Project: UTAH-UINTAH	Site: NBU 920-20D		Rig Name No: PROPETRO 11/11, SST 54/54
Event: DRILLING	Start Date: 11/10/2011		End Date: 2/16/2012
Active Datum: RKB @4,828.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	14:30 - 15:00	0.50	DRLPRO	07	A	P		RIG SERVICE, FUNCTION BOP & C-O-M
	15:00 - 0:00	9.00	DRLPRO	02	B	P		DRLG ROTATE/SLIDE/SURVEY. F/ 7,934, TO 8,478, AROP 60.4, WOB 20K, TDRPM 45 MMRPM 87,TOTAL RPM 160,DIFF, 245/155 GPM.502 PSI ON/OFF 1,980/1500,TORQUE ON/OFF 8135/5840. FLARE 2'/ 3'
2/8/2012	0:00 - 15:30	15.50	DRLPRO	02	B	P		DRLG ROTATE/SLIDE/SURVEY. F/ 8,478, TO 9,173, AROP 44.8, WOB 20K, TDRPM 40/45 MMRPM 87,TOTAL RPM 132,DIFF, 380/165 GPM.502 PSI ON/OFF 2,150/1955,TORQUE ON/OFF 10,255/5925. FLARE 2'/ 3'
	15:30 - 16:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	16:00 - 0:00	8.00	DRLPRO	02	B	P		DRLG ROTATE/SLIDE/SURVEY. F/ 9,173, TO 9,450, AROP 34.6, WOB 22K,TDRPM 35/45 MMRPM 87,TOTALRPM 132,DIFF,295/98 GPM.505 PSI ON/OFF 2,340/1900,TORQUE ON/OFF 7885/5950. FLARE 2'/ 3'
2/9/2012	0:00 - 14:00	14.00	DRLPRO	02	B	P		DRLG ROTATE/SLIDE/SURVEY. F/ 9,450, TO 9,935, AROP 34.6, WOB 22K,TDRPM 35/45 MMRPM 87,TOTALRPM 124,DIFF 465/135 GPM.500 PSI ON/OFF 2,625/2365,TORQUE ON/OFF 8895/6500. FLARE 2'/ 3'
	14:00 - 14:30	0.50	DRLPRO	07	A	P		RIG SERVICE, FUNCTION BOP & C-O-M
	14:30 - 0:00	9.50	DRLPRO	02	B	P		DRLG ROTATE/SLIDE/SURVEY. F/ 9,935, TO 10,374, AROP46.2,WOB 22K,TDRPM 35/45 MMRPM 85,TOTAL RPM 130,DIFF 465/125, GPM 505, PSI ON/OFF 2,630/2415,TORQUE ON/OFF 8985/4955. FLARE 5'/12' STRATA ON LINE ANNULAR PSI 100/125
2/10/2012	0:00 - 14:30	14.50	DRLPRO	02	C	P		DRLG. ROTATE/SURVEY. F/ 10,374, TO 10.936, AROP 38.7,WOB 18/20K,TDRPM 38 MMRPM 78,TOTAL RPM 115,DIFF 365/115,GPM485, SPP NO/OFF BTTM 2,755/2540,TORQUE ON/OFF 10,500/6490. FLARE 20'/45' STRATA ON LINE ANNULAR PSI 165 / 225
	14:30 - 15:00	0.50	DRLPRO	07	A	P		RIG SERVICE, FUNCTION BOP & C-O-M
	15:00 - 0:00	9.00	DRLPRO	02	B	P		DRLG. ROTATE/SURVEY. F/ 10,936, TO 11,205, AROP 29.8 ,WOB 18/20K,TDRPM 38/40 MMRPM 78,TOTAL RPM 115, DIFF 276/96,GPM 485, SPP NO/OFF BTTM 2,655/2525,TORQUE ON/OFF 11,250/6025 FLARE 25' STRATA ON LINE ANNULAR PSI AVG.130
2/11/2012	0:00 - 15:30	15.50	DRLPRO	02	B	P		DRLG. ROTATE/SURVEY. F/ 11,205, TO 11,460, AROP 16.5 ,WOB 22K,TDRPM 38/42 MMRPM 78,TOTAL RPM 115, DIFF 175/235,GPM 485, SPP NO/OFF2566/2250 TORQUE ON/OFF 8990/6240 FLARE 25' STRATA ON LINE ANNULAR PSI AVG.142
	15:30 - 16:00	0.50	DRLPRO	07	A	P		RIG SERVICE, FUNCTION BOP & C-O-M
	16:00 - 0:00	8.00	DRLPRO	02	C	P		DRLG. ROTATE/SURVEY. F/ 11,460, TO 11,599, AROP 17.3 ,WOB 22K,TDRPM 43 MMRPM 78,TOTAL RPM 115, DIFF 175/235,GPM 485, SPP NO/OFF2585/2250 TORQUE ON/OFF 8990/6240 FLARE 25' STRATA ON LINE ANNULAR PSI AVG.132

US ROCKIES REGION

Operation Summary Report

Well: NBU 920-20D			Spud Date: 1/13/2012
Project: UTAH-UINTAH	Site: NBU 920-20D		Rig Name No: PROPETRO 11/11, SST 54/54
Event: DRILLING	Start Date: 11/10/2011		End Date: 2/16/2012
Active Datum: RKB @4,828.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/12/2012	0:00 - 10:30	10.50	DRLPRO	02	C	P		DRLG. ROTATE/SURVEY. F/ 11,599, TO 11,789, AROP 18. ,WOB 22K,TDRPM 43 MMRPM 78,TOTAL RPM 115, DIFF 175/235,GPM 485, SPP NO/OFF2585/2250 TORQUE ON/OFF 8990/6240 FLARE 25' STRATA ON LINE ANNULAR PSI AVG.176
	10:30 - 12:30	2.00	DRLPRO	05	A	P		SETBACK ONE STAND TO WORK PIPE CIRC.COND.MUD SPOT 150 Bbls. 12.4 PPG.PILL FOR TRIP.
	12:30 - 13:00	0.50	DRLPRO	05	J	P		FLOW CHECK WELL FLOWING 1" STREAME AND INCREASING.
	13:00 - 17:00	4.00	DRLPRO	05	A	P		DISPLACE WITH 900 Bbls 11.4 MUD FROM TANK FRAM WHILE PUMPING 9.3 TO TANK FRAM 850 Bbls AND CIRC. OUT GAS MUD OUT 9.8 IN 10.8 VALVE ON SUCTION NOT HOLDING.SCREEN SHAKERS DOWN FROM 170 TO 100 TO HANDEL MUD AND LCM FROM TANK FARM WILL SCREEN UP TO 170 API AFTER TRIP.
	17:00 - 21:00	4.00	DRLPRO	05	A	P		CIRC.COND.MUD TO 11.3 VIS. 45 IN AND OUT. SLUG PIPE FOR TRIP.
	21:00 - 21:30	0.50	DRLPRO	05	J	P		FLOW CHECK NO FLOW
	21:30 - 0:00	2.50	DRLPRO	06	A	P		TRIP OUT FOR BIT & MOTOR
2/13/2012	0:00 - 4:00	4.00	DRLPRO	06	A	P		TOOH FOR BIT & MOTOR NO PROBLEM NO DRAG NO TIGHT SPOTS.
	4:00 - 5:00	1.00	DRLPRO	06	A	P		BREAK BIT & CHANGE OUT MOTOR MACK UP BIT AND BATTERY PACK
	5:00 - 6:00	1.00	DRLPRO	10	C			ORINENT DIRECTIONAL TOOLS.
	6:00 - 7:00	1.00	DRLPRO	06	A	P		TRIP IN W/BHA TEST MOTOR, INSTALL ROT.RUBBER.
	7:00 - 8:00	1.00	DRLPRO	06	A	P		TRIP IN TO SHOE.
	8:00 - 9:30	1.50	DRLPRO	09	A	P		CUT DRILLING LINE 94'
	9:30 - 11:30	2.00	DRLPRO	06	A	P		TRIP IN TAG SET DOWN ON BRIDGE AT 5,667
	11:30 - 13:30	2.00	DRLPRO	03	A	P		CIRC. AT 5,667 PACK OFF WORK FREE, WASH AND REAM F/ 5,667 TO 6,363 WELL FLOWING.
	13:30 - 15:00	1.50	DRLPRO	06	A	P		TRIP STRIP IN STRATA HOLDING 150 TO 275 ON BACK SIDE TAG BRIDGE AT 7,400 WASH AND REAM TO 7,459 TRIP IN BRIDGE AT 9,420 WASH AND REAM TO 9,458, CIRC. CLEAN
	15:00 - 17:30	2.50	DRLPRO	06	A	P		TRIP STRIP IN F/ 9,458 TO 11,651
	17:30 - 18:00	0.50	DRLPRO	03	E	P		FILL PIPE WASH AND REAM F/ 11,651 TO 11,789 BOTTOM
	18:00 - 0:00	6.00	DRLPRO	02	B	P		DRLG. ROTATE/SURVEY. F/ 11,789, TO 12,061, **TD WELL@ 23:59 2/13/12** AROP 45.3. ,WOB 22K,TDRPM 51 MMRPM 78,TOTAL RPM 115, DIFF 205,GPM 405, SPP NO/OFF2895/2665 TORQUE, 10475 FLARE 0' STRATA ON LINE ANNULAR PSI AVG.85
2/14/2012	0:00 - 1:00	1.00	DRLPRO	05	A	P		CIRC.FOR SHORT TRIP COND.MUD
	1:00 - 1:30	0.50	DRLPRO	06	E	P		WIPER TRIP 5 STANDS
	1:30 - 3:30	2.00	DRLPRO	05	A	P		CIRC.COND MUD WT. TO 11.7 VIS 41 FOR LOG.
	3:30 - 10:00	6.50	DRLPRO	06	A	P		TRIP OUT FOR LOG WORK & WIPE TIGHT SPOT F/ 4,790 TO 4,503

US ROCKIES REGION

Operation Summary Report

Well: NBU 920-20D			Spud Date: 1/13/2012
Project: UTAH-UINTAH	Site: NBU 920-20D		Rig Name No: PROPETRO 11/11, SST 54/54
Event: DRILLING	Start Date: 11/10/2011		End Date: 2/16/2012
Active Datum: RKB @4,828.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	10:00 - 11:00	1.00	DRLPRO	06	A	P		LAY DOWN DIRECTIONAL TOOLS & LOAD OUT, RELEASE LEAM.
	11:00 - 12:30	1.50	DRLPRO	11	G	P		SAFETY MEETING & RIG UP HALLIBURTON WIRELINE.
	12:30 - 14:30	2.00	DRLPRO	11	G	P		ATTEMPT LLOG WITH HALLIBURTON ULTRA SLIM HOLE TOOLS,STACK OUT LOG AT 4,590,POOH WITH WIRE LINE.
	14:30 - 15:00	0.50	DRLPRO	11	G	X		RIG DOWN HALCO.WIRE LINE,STANDBY
	15:00 - 19:00	4.00	DRLPRO	06	F	X		TRIP IN HOLE WITH OPEN END DRILL PIPE TO 7045 FOR LOG THROUGH DRILL PIPE W/ ULTRA SLIM TOOLS
	19:00 - 20:00	1.00	DRLPRO	11	G	X		RIG UP RUN IN HOLE WITH ULTRA SLIM TOOLS TO 7045.
	20:00 - 0:00	4.00	DRLPRO	11	G	P		LOG WELL WITH TRIPLE COMBO, LOG F/ 7045 TO 12,061, (LOGGERS TD 12,075)
2/15/2012	0:00 - 1:30	1.50	DRLPRO	11	G	P		LOG WELL F/ 7,045 TO 12,061 WITH TRIPLE COMBO AND RIG DOWN. (LOGGERS TD 12,075.)
	1:30 - 8:00	6.50	DRLPRO	06	A	P		SAFETY MEETING W/ KIMZEY & RIG CREW RIG UP LAY DOWN DRILL PIPE F/ 7045 TO SURFACE
	8:00 - 9:30	1.50	DRLPRO	06	A	P		TRIP IN 43 STD DP.
	9:30 - 13:30	4.00	DRLPRO	06	A	P		LAY DOWN DP
	13:30 - 14:00	0.50	DRLPRO	06	A	P		TRIP IN 10 STD HWDP
	14:00 - 15:00	1.00	DRLPRO	06	A	P		LAY DOWN HWDP & PULL WEAR BUSHING.
	15:00 - 0:00	9.00	DRLPRO	12	C	P		PJSM. RIG UP KIMZEY CASING CREW AND RUN 167 JTS OF 4.5", 11.6#, P110, LT&C AND 120 JTS OF 4.5", 11.6#, P110, DQX CASING WITH WEATHERFORD FLOAT SHOE AND FLOAT COLLAR LOCATED 1 JT ABOVE SHOE. 20 CENTRALIZERS SPACED 10' ABOVE SHOE, 2ND & 3RD COLLARS, AND EVERY 3RD COLLAR TO 9794'. MARKER JTS @ 11,381' & 8,692'. CROSS OVER JT @ 5028'. LANDED CASING @ 12061'.
2/16/2012	0:00 - 5:00	5.00	DRLPRO	12	C	P		FINISH RUNNING 4.5" PRODUCTION CASING. WASH 2 JTS TO BOTTOM.
	5:00 - 7:00	2.00	DRLPRO	05	A	P		CIRCULATE CASING WITH RIG PUMP
	7:00 - 9:30	2.50	DRLPRO	21	D	Z		CIRCULATE AND WAIT ON DIFFERENT PUMP TRUCK. FIRST PUMP TRUCK LOST HYDRAULIC LINE.
	9:30 - 13:00	3.50	DRLPRO	12	E	P		CEMENT 4.5" PRODUCTION CASING BY BJ CEMENTERS WITH 580 SX LEAD CEMENT, PREMIUM LITE 2 WITH 6% GEL, 5#/SX KOLSEAL, 0.4% SMS, 0.25#/SX CEL FLAKE, & 0.25 % R-3. TAILED IN WITH 1687 SX 50/50 POZ CEMENT WITH 10% SALT, 0.2% R-3, 0.005 # SF, & 0.002% FP-6L. PUMPED 25 BBL FRESH WATER FLUSH WATER AHEAD OF CEMENT. MIXED LEAD CEMENT @ 12.5 PPG WITH YIELD OF 2.02 CF/SX. MIXED TAIL CEMENT @ 14.3 PPG WITH YIELD OF 1.31 CF/SX. HOLE CIRCULATED GOOD THROUGH OUT JOB. DISPLACED WITH 186.9 BBL FRESH WATER WITH CLAY CARE & MAGNACIDE. NO CEMENT TO SURFACE. FINAL LIFT PRESSURE 3540 PSI. BUMP PLUG TO 4142 PSI. FLOATS HELD. PLUG DOWN @ 12:14 PM, 2/16/2012. RIG DOWN CEMENTERS.
	13:00 - 16:00	3.00	DRLPRO	14	A	P		NIPPLE DOWN BOP, SET SLIPS. CUT OFF CASING.

US ROCKIES REGION

Operation Summary Report

Well: NBU 920-20D			Spud Date: 1/13/2012
Project: UTAH-UINTAH	Site: NBU 920-20D		Rig Name No: PROPETRO 11/11, SST 54/54
Event: DRILLING	Start Date: 11/10/2011		End Date: 2/16/2012
Active Datum: RKB @4,828.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	16:00 - 18:00	2.00	DRLPRO	01	E	P		FINISH CLEANING MUD TANKS. RELEASE RIG @ 18:00 2/16/2012.

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 920-20D	**Wellbore No.**	OH
Well Name	NBU 920-20D	**Wellbore Name**	NBU 920-20D
Report No.	1	**Report Date**	3/5/2012
Project	UTAH-UINTAH	**Site**	NBU 920-20D
Rig Name/No.		**Event**	COMPLETION
Start Date	3/1/2012	**End Date**	3/13/2012
Spud Date	1/13/2012	**Active Datum**	RKB @4,828.00usft (above Mean Sea Level)
UWI	NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

1.3 General

Contractor		**Job Method**	PERFORATE	**Supervisor**	
Perforated Assembly	PRODUCTION CASING	**Conveyed Method**	WIRELINE		

1.4 Initial Conditions

Fluid Type	KCL WATER	**Fluid Density**	
Surface Press		**Estimate Res Press**	
TVD Fluid Top		**Fluid Head**	
Hydrostatic Press		**Press Difference**	
Balance Cond	NEUTRAL		

1.5 Summary

Gross Interval	11,462.0 (usft)-11,828.0 (u	**Start Date/Time**	3/8/2012 12:00AM
No. of Intervals	13	**End Date/Time**	3/8/2012 12:00AM
Total Shots	72	**Net Perforation Interval**	24.00 (usft)
Avg Shot Density	3.00 (shot/ft)	**Final Surface Pressure**	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

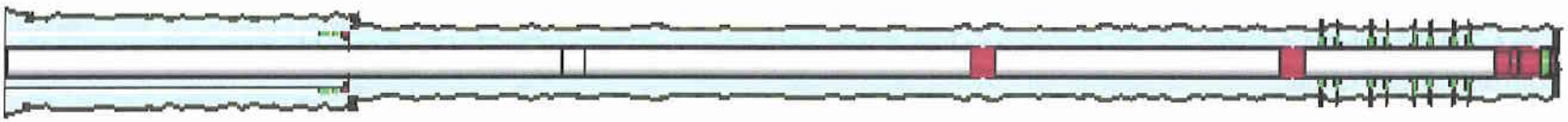
Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
3/8/2012 12:00AM	MESAVERDE/			11,462.0	11,464.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
	MESAVERDE/			11,478.0	11,479.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
	MESAVERDE/			11,486.0	11,487.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
	MESAVERDE/			11,503.0	11,507.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
	MESAVERDE/			11,577.0	11,579.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
	MESAVERDE/			11,628.0	11,630.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
3/8/2012 12:00AM	MESAVERDE/			11,641.0	11,643.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
	MESAVERDE/			11,658.0	11,660.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
	MESAVERDE/			11,718.0	11,720.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
	MESAVERDE/			11,737.0	11,738.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
	MESAVERDE/			11,748.0	11,750.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
3/8/2012 12:00AM	MESAVERDE/			11,761.0	11,763.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
3/8/2012 12:00AM	MESAVERDE/			11,827.0	11,828.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

3 Plots

3.1 Wellbore Schematic



US ROCKIES REGION

Operation Summary Report

Well: NBU 920-20D			Spud Date: 1/13/2012
Project: UTAH-UINTAH	Site: NBU 920-20D		Rig Name No:
Event: COMPLETION	Start Date: 3/1/2012		End Date: 3/13/2012
Active Datum: RKB @4,828.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
3/1/2012	12:00 - 14:00	2.00	COMP	33		P		FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 28 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 31 PSI. 1ST PSI TEST T/ 9000 PSI. HELD FOR 30 MIN LOST 119 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL. SWIFW
3/8/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, PRESSURE TESTING FRAC VALVES & WATCHING SURFACE.
	7:30 - 9:30	2.00	COMP	33	D	P		RU B&C INSTALL PLUGGED TBG HANGER, TEST FRAC VALVE TO 9000 PSI, TOP VALVE LEAKING HAD TO REMOVE & ISTALLL NEW VALVE, RE TEST TO 9000 PSI FOR 10 MIN GOOD TEST. PULL HANGER RD B&C.
	9:30 - 15:00	5.50	COMP	37	B	P		RU JW WIRE LINE RIH W/ 31/8 23 GRM .36" HOLE EXP GUNS & PERF 1ST STG AS OF PROCEDURE, POOH SWI PREP TO FRAC IN AM.
3/9/2012	7:00 - 9:15	2.25	COMP	48		P		HSM W/ SUPERIOR, STAY AWAY FROM WELL HEAD & ALL HIGH PRESSURE LINES. KEEP A EYE ON SURFACE LINE. HAD TO REPAIR A STARTER ON 1 TRUCK. PRIME PUMPS & LINES TEST LINES TO 9500 PSI, SET POPOFF @ 8900 PSI, SET KICK OUT ON 3 TRKS TO 8700 PSI, 3 TRKS @ 8800 PSI. (07:40) (STG #1) WHP 1300 PSI, BRK 4299 PSI @ 4.2 BPM. ISIP 3757 PSI, FG .76. SPOT ACID ON PERFS LET SOAK FOR 5 MIN. CALC HOLES OPEN @ 50.8 BPM @ 7140 PSI = 92% HOLES OPEN. MP 8264 PSI, MR 51.9 BPM, AP 6564 PSI, AR 49.7 BPM ISIP 3777 PSI, FG .76 NPI 20 PSI.
	9:15 - 13:09	3.90	COMP	36	E	P		(STG #2) PU 41/2 BEAR CLAW 10-K CBP & 31/8 EXP 23 GRM .36" HLS, 120 DEG PHASING, SET CBP @ 11690', PERF WELL AS OF PROCEDURE. WHP 3800 PSI, BRK 5006 PSI @ 4.0 BPM. ISIP 4050 PSI, FG .79. CALC HOLES OPEN @ 49.9 BPM @ 6932 PSI = 100% HOLES OPEN. MP 7420 PSI, MR 50.4 BPM, AP 6647 PSI, AR 49.8 BPM ISIP 3696 PSI, FG .76 NPI -357 PSI.

US ROCKIES REGION

Operation Summary Report

Well: NBU 920-20D			Spud Date: 1/13/2012
Project: UTAH-UINTAH	Site: NBU 920-20D		Rig Name No:
Event: COMPLETION	Start Date: 3/1/2012		End Date: 3/13/2012
Active Datum: RKB @4,828.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	13:09 - 16:29	3.33	COMP	36	E	P		(STG # 3) PU 41/2 BEAR CLAW 10-K CBP & 31/8 EXP 23 GRM .36" HLS, 120 DEG PHASING, SET CBP @ 11,537', PERF WELL AS OF PROCEDURE. WHP 2590 PSI, BRK 2927 PSI @ 4.9 BPM. ISIP 2633 PSI, FG .67. CALC HOLES OPEN @ 50.0 BPM @ 6221 PSI = 82% HOLES OPEN. MP 8458 PSI, MR 53.5 BPM, AP 5921 PSI, AR 48.8 BPM ISIP 3350 PSI, FG .73 NPI 717 PSI. (LOST SUCTION ON FLUSH SHORT BY 3 BBLS) BLEW 2 SUCTION HOSES WHEN SUCTION PSI CAME BACK. TOTAL 317,321 LBS 30/50 TLC SAND TOTAL 12,419 BBLS WATER 670 GALS SCALE INH 124 GALS BIOCIDE
	16:29 - 18:30	2.02	COMP	34	I	P		(KILL PLUG) RIH W/ BEAR CLAW 8-K CBP & SET @ 11,412' POOH SWI RD WL & FRAC CREW. SDFWE
3/12/2012	7:00 - 7:30	0.50	COMP	48		P		HS, PICKING UP TBG OFF FLOAT.
	7:30 - 16:30	9.00	COMP	31	I	P		ND FV NU 10K BOPS & HYD, TALLY & PU 37/8 BIT, POBS, 1.875 X/N & 260 JTS 23/8 L-80 OFF FLOAT TO 11400', RU DRLG EQUIP BOKE CIRC TEST BOPS TO 4,000 PSI, PREP TO D/O IN AM.
3/13/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, DRILLING CBPS.

US ROCKIES REGION

Operation Summary Report

Well: NBU 920-20D			Spud Date: 1/13/2012
Project: UTAH-UINTAH	Site: NBU 920-20D		Rig Name No:
Event: COMPLETION	Start Date: 3/1/2012		End Date: 3/13/2012
Active Datum: RKB @4,828.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:30 - 15:00	7.50	COMP	44	C	P		'BROKE CIRC CONVENTIONAL. C/O 90' SAND TAG 1ST PLUG @ 11,412' DRL PLG IN 9 MIN, 1000# PSI INCREASE RIH. C/O 25' SAND TAG 2ND PLUG @ 11,537' DRL PLG IN 10 MIN, 250# PSI INCREASE RIH. C/O 25' SAND TAG 3RD PLUG @ 11,690' DRL PLG IN 15 MIN, 200# PSI INCREASE RIH. C/O TO 11,944', CIRC CLN, L/D 19 JTS. LAND TBG ON 358 JTS 23/8 L-80. ND BOPS NU WH, TEST FLOW LINE TO 4,000 PSI, PUMP OFF BIT, TURN WELL OVER TO FB CREW. WIND BLOWING TO HARD TO RIG DOWN. SDFN KB= 18' (SURFOPEN W/ POPOFF) HANGER = .83' SICP 2958 PSI, FTP 234 PSI 358 JTS 23/8 L-80 = 11,327.98 POBS W/ 1.875 X/N = 2.20' EOT @ 11,349.01' TWTR 12,589 BBLS TWR 1300 BBLS TWLTR 11,289 BBLS 383 JTS IN WELL 358 LANDED 25 TO RETURN
	14:00 -		PROD	50				WELL TURNED TO SALES AT 1400 HR ON 3-13-2012 - 2500 MCFD, 2400 BWPD, FCP 2800#, FTP 2600#, 16/64 CK

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well Information

Well	NBU 920-20D	**Wellbore No.**	OH
Well Name	NBU 920-20D	**Common Name**	NBU 920-20D
Project	UTAH-UINTAH	**Site**	NBU 920-20D
Vertical Section Azimuth	0.00 (°)	**North Reference**	True
Origin N/S		**Origin E/W**	
Spud Date	1/13/2012	**UWI**	NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0
Active Datum	RKB @4,828.00usft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	**Company**	WEATHERFORD
Started	1/13/2012	**Ended**	
Tool Name		**Engineer**	Anadarko Employee

2.1.1 Tie On Point

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)
18.00	0.00	0.00	18.00	0.00	0.00

2.1.2 Survey Stations

Date	Type	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	TFace (°)
1/13/2012	Tie On	18.00	0.00	0.00	18.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/14/2012	NORMAL	184.00	1.23	20.54	183.99	1.67	0.63	1.67	0.74	0.74	0.00	20.54
	NORMAL	269.00	1.86	17.18	268.96	3.84	1.35	3.84	0.75	0.74	-3.95	-9.86
	NORMAL	354.00	1.21	19.01	353.92	6.01	2.05	6.01	0.77	-0.76	2.15	176.60
	NORMAL	504.00	0.31	185.63	503.92	7.10	2.53	7.10	1.01	-0.60	111.08	177.28
	NORMAL	654.00	0.50	216.13	653.91	6.17	2.10	6.17	0.19	0.13	20.33	64.54
	NORMAL	804.00	0.63	206.38	803.90	4.90	1.35	4.90	0.11	0.09	-6.50	-41.43
	NORMAL	954.00	0.56	158.63	953.90	3.48	1.25	3.48	0.32	-0.05	-31.83	-121.44
	NORMAL	1,104.00	0.56	171.63	1,103.89	2.07	1.63	2.07	0.08	0.00	8.67	96.50
	NORMAL	1,254.00	0.54	136.88	1,253.88	0.83	2.21	0.83	0.22	-0.01	-23.17	-110.70
	NORMAL	1,404.00	0.38	184.76	1,403.88	-0.18	2.66	-0.18	0.27	-0.11	31.92	135.33
	NORMAL	1,704.00	0.56	125.07	1,703.87	-2.01	3.77	-2.01	0.16	0.06	-19.90	-101.39
	NORMAL	2,004.00	0.75	98.76	2,003.85	-3.16	6.91	-3.16	0.12	0.06	-8.77	-71.33
	NORMAL	2,304.00	0.75	104.38	2,303.83	-3.94	10.76	-3.94	0.02	0.00	1.87	92.81
1/15/2012	NORMAL	2,604.00	0.81	112.63	2,603.80	-5.25	14.62	-5.25	0.04	0.02	2.75	66.05
	NORMAL	3,009.00	0.50	92.63	3,008.77	-6.42	19.02	-6.42	0.00	0.00	0.00	0.00
2/3/2012	NORMAL	3,009.00	0.50	92.30	3,008.77	-6.42	19.02	-6.42	0.00	0.00	0.00	0.00
2/4/2012	NORMAL	3,009.00			3,008.77	-6.42	19.02	-6.42	0.00	0.00	0.00	0.00

2.1.2 Survey Stations (Continued)

Date	Type	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	TFace (°)
2/5/2012	NORMAL	3,005.00	0.50	92.63	3,004.77	-6.42	18.98	-6.42	0.09	-0.08	-4.99	-153.31
	NORMAL	3,122.00	0.57	71.37	3,121.77	-6.24	19.55	-6.24	0.50	0.50	0.00	71.37
	NORMAL	3,217.00	1.32	354.38	3,216.76	-5.00	19.89	-5.00	1.38	0.79	-81.04	-101.97
	NORMAL	3,311.00	1.32	353.85	3,310.73	-2.85	19.67	-2.85	0.01	0.00	-0.56	-90.26
	NORMAL	3,407.00	1.19	354.20	3,406.71	-0.75	19.45	-0.75	0.14	-0.14	0.36	176.80
	NORMAL	3,502.00	2.07	342.52	3,501.67	1.86	18.83	1.86	0.99	0.93	-12.29	-26.59
	NORMAL	3,598.00	1.71	349.46	3,597.62	4.93	18.05	4.93	0.44	-0.38	7.23	150.99
	NORMAL	3,693.00	1.58	354.20	3,692.58	7.62	17.66	7.62	0.20	-0.14	4.99	136.05
	NORMAL	3,788.00	1.71	324.50	3,787.54	10.08	16.70	10.08	0.90	0.14	-31.26	-96.37
	NORMAL	3,884.00	1.27	326.70	3,883.51	12.13	15.29	12.13	0.46	-0.46	2.29	173.69
	NORMAL	3,979.00	2.29	308.06	3,978.46	14.18	13.21	14.18	1.22	1.07	-19.62	-39.12
	NORMAL	4,075.00	2.29	313.60	4,074.39	16.69	10.31	16.69	0.23	0.00	5.77	92.77
	NORMAL	4,170.00	1.89	322.30	4,169.33	19.24	7.98	19.24	0.54	-0.42	9.16	145.87
	NORMAL	4,266.00	1.45	325.38	4,265.28	21.49	6.32	21.49	0.47	-0.46	3.21	170.01
	NORMAL	4,360.00	1.80	315.80	4,359.25	23.53	4.62	23.53	0.47	0.37	-10.19	-42.67
	NORMAL	4,456.00	1.14	305.60	4,455.21	25.16	2.79	25.16	0.74	-0.69	-10.63	-163.42
	NORMAL	4,552.00	1.80	307.80	4,551.18	26.64	0.82	26.64	0.69	0.69	2.29	5.99
2/6/2012	NORMAL	4,647.00	1.71	304.90	4,646.14	28.37	-1.52	28.37	0.13	-0.09	-3.05	-136.82
	NORMAL	4,742.00	0.79	337.59	4,741.12	29.79	-2.93	29.79	1.19	-0.97	34.41	157.79
	NORMAL	4,838.00	1.89	318.52	4,837.09	31.58	-4.23	31.58	1.22	1.15	-19.86	-31.79
	NORMAL	4,933.00	1.76	33.02	4,932.05	33.98	-4.47	33.98	2.33	-0.14	78.42	129.92
	NORMAL	5,028.00	2.46	320.54	5,027.00	36.78	-4.97	36.78	2.69	0.74	-76.29	-113.47
	NORMAL	5,124.00	2.24	320.54	5,122.92	39.82	-7.48	39.82	0.23	-0.23	0.00	180.00
	NORMAL	5,219.00	1.63	333.11	5,217.87	42.46	-9.27	42.46	0.78	-0.64	13.23	151.34
	NORMAL	5,314.00	1.80	319.58	5,312.82	44.80	-10.85	44.80	0.46	0.18	-14.24	-74.08
	NORMAL	5,409.00	1.58	313.69	5,407.78	46.84	-12.76	46.84	0.29	-0.23	-6.20	-144.63
	NORMAL	5,505.00	1.58	313.69	5,503.75	48.67	-14.67	48.67	0.00	0.00	0.00	0.00
	NORMAL	5,600.00	2.20	311.58	5,598.69	50.78	-16.99	50.78	0.66	0.65	-2.22	-7.46
	NORMAL	5,696.00	1.85	314.65	5,694.63	53.09	-19.47	53.09	0.38	-0.36	3.20	164.31
	NORMAL	5,791.00	1.71	323.79	5,789.59	55.31	-21.39	55.31	0.33	-0.15	9.62	120.77
	NORMAL	5,887.00	1.71	332.94	5,885.55	57.75	-22.89	57.75	0.28	0.00	9.53	94.57
	NORMAL	5,982.00	1.54	339.44	5,980.51	60.20	-23.98	60.20	0.26	-0.18	6.84	135.90
	NORMAL	6,067.00	2.15	316.50	6,065.46	62.43	-25.48	62.43	1.11	0.72	-26.99	-62.29
	NORMAL	6,171.00	1.93	318.35	6,169.40	65.15	-27.99	65.15	0.22	-0.21	1.78	164.26
	NORMAL	6,267.00	1.93	327.49	6,265.34	67.72	-29.93	67.72	0.32	0.00	9.52	94.57
	NORMAL	6,362.00	1.76	335.22	6,360.29	70.40	-31.40	70.40	0.32	-0.18	8.14	128.16
	NORMAL	6,458.00	1.23	334.96	6,456.26	72.67	-32.46	72.67	0.55	-0.55	-0.27	-179.40
	NORMAL	6,553.00	1.27	334.61	6,551.24	74.54	-33.34	74.54	0.04	0.04	-0.37	-10.98
	NORMAL	6,649.00	1.05	347.61	6,647.22	76.36	-33.99	76.36	0.36	-0.23	13.54	136.27
	NORMAL	6,744.00	0.92	350.07	6,742.21	77.97	-34.30	77.97	0.14	-0.14	2.59	163.21
	NORMAL	6,840.00	1.10	354.03	6,838.19	79.64	-34.53	79.64	0.20	0.19	4.13	23.18
2/7/2012	NORMAL	6,935.00	1.10	63.81	6,933.18	80.95	-33.81	80.95	1.32	0.00	73.45	124.89
	NORMAL	7,030.00	1.05	69.79	7,028.16	81.65	-32.18	81.65	0.13	-0.05	6.29	116.99
	NORMAL	7,126.00	1.14	64.52	7,124.14	82.37	-30.49	82.37	0.14	0.09	-5.49	-50.87
	NORMAL	7,221.00	1.41	69.76	7,219.12	83.18	-28.54	83.18	0.31	0.28	5.52	25.99
	NORMAL	7,316.00	1.36	74.98	7,314.09	83.88	-26.35	83.88	0.14	-0.05	5.49	114.21
	NORMAL	7,411.00	1.54	80.34	7,409.06	84.38	-24.00	84.38	0.24	0.19	5.64	39.70
	NORMAL	7,506.00	1.32	79.46	7,504.03	84.80	-21.67	84.80	0.23	-0.23	-0.93	-174.74
	NORMAL	7,602.00	1.58	121.82	7,600.00	84.30	-19.46	84.30	1.12	0.27	44.13	98.14
	NORMAL	7,697.00	1.41	114.62	7,694.97	83.12	-17.28	83.12	0.27	-0.18	-7.58	-135.71
	NORMAL	7,792.00	1.67	161.46	7,789.94	81.32	-15.78	81.32	1.31	0.27	49.31	102.38
	NORMAL	7,887.00	1.41	163.04	7,884.91	78.89	-15.00	78.89	0.28	-0.27	1.66	171.51
	NORMAL	7,982.00	1.41	161.37	7,979.88	76.67	-14.29	76.67	0.04	0.00	-1.76	-90.83
	NORMAL	8,077.00	1.27	162.34	8,074.85	74.56	-13.59	74.56	0.15	-0.15	1.02	171.28
	NORMAL	8,172.00	1.32	153.99	8,169.83	72.57	-12.79	72.57	0.21	0.05	-8.79	-79.36

2.1.2 Survey Stations (Continued)

Date	Type	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	TFace (°)
2/7/2012	NORMAL	8,268.00	1.01	150.04	8,265.81	70.84	-11.89	70.84	0.33	-0.32	-4.11	-167.45
	NORMAL	8,364.00	1.14	138.17	8,361.79	69.40	-10.83	69.40	0.27	0.14	-12.36	-65.75
	NORMAL	8,459.00	1.01	136.15	8,456.77	68.09	-9.62	68.09	0.14	-0.14	-2.13	-164.76
2/8/2012	NORMAL	8,554.00	1.10	138.96	8,551.76	66.80	-8.44	66.80	0.11	0.09	2.96	31.30
	NORMAL	8,649.00	0.97	156.39	8,646.74	65.38	-7.52	65.38	0.36	-0.14	18.35	120.99
	NORMAL	8,744.00	0.92	123.04	8,741.73	64.22	-6.56	64.22	0.57	-0.05	-35.11	-111.72
	NORMAL	8,839.00	1.01	124.28	8,836.72	63.34	-5.22	63.34	0.10	0.09	1.31	13.68
	NORMAL	8,935.00	1.14	120.59	8,932.70	62.37	-3.70	62.37	0.15	0.14	-3.84	-29.89
	NORMAL	9,030.00	0.97	116.72	9,027.68	61.53	-2.17	61.53	0.19	-0.18	-4.07	-159.19
	NORMAL	9,126.00	1.19	110.75	9,123.67	60.81	-0.51	60.81	0.26	0.23	-6.22	-30.09
	NORMAL	9,221.00	1.23	121.73	9,218.64	59.93	1.28	59.93	0.25	0.04	11.56	85.73
	NORMAL	9,317.00	1.41	132.27	9,314.62	58.59	3.03	58.59	0.31	0.19	10.98	58.79
	NORMAL	9,411.00	1.27	129.82	9,408.59	57.15	4.68	57.15	0.16	-0.15	-2.61	-158.97
2/9/2012	NORMAL	9,506.00	1.32	135.53	9,503.57	55.69	6.26	55.69	0.15	0.05	6.01	71.69
	NORMAL	9,601.00	1.45	141.07	9,598.54	53.97	7.78	53.97	0.20	0.14	5.83	48.64
	NORMAL	9,697.00	1.58	133.34	9,694.51	52.12	9.51	52.12	0.25	0.14	-8.05	-61.44
	NORMAL	9,792.00	1.05	180.97	9,789.49	50.35	10.44	50.35	1.23	-0.56	50.14	138.35
	NORMAL	9,887.00	1.23	192.84	9,884.47	48.49	10.20	48.49	0.31	0.19	12.49	58.72
	NORMAL	9,983.00	1.27	190.46	9,980.44	46.44	9.78	46.44	0.07	0.04	-2.48	-53.58
	NORMAL	10,079.00	0.79	162.78	10,076.43	44.76	9.78	44.76	0.71	-0.50	-28.83	-147.24
	NORMAL	10,174.00	1.05	167.35	10,171.42	43.28	10.17	43.28	0.28	0.27	4.81	18.05
	NORMAL	10,270.00	0.07	149.42	10,267.41	42.37	10.39	42.37	1.02	-1.02	-18.68	-178.74
2/10/2012	NORMAL	10,365.00	0.75	109.43	10,362.41	42.12	11.01	42.12	0.73	0.72	-42.09	-43.69
	NORMAL	10,460.00	1.19	101.08	10,457.39	41.72	12.56	41.72	0.49	0.46	-8.79	-22.01
	NORMAL	10,555.00	1.32	106.75	10,552.37	41.22	14.58	41.22	0.19	0.14	5.97	46.55
	NORMAL	10,650.00	1.45	106.79	10,647.34	40.55	16.77	40.55	0.14	0.14	0.04	0.45
	NORMAL	10,745.00	1.67	99.41	10,742.31	39.98	19.29	39.98	0.31	0.23	-7.77	-46.13
	NORMAL	10,840.00	1.71	106.53	10,837.27	39.35	22.02	39.35	0.22	0.04	7.49	82.79
	NORMAL	10,936.00	2.15	110.75	10,933.21	38.31	25.07	38.31	0.48	0.46	4.40	20.02
	NORMAL	11,031.00	2.24	116.46	11,028.14	36.85	28.40	36.85	0.25	0.09	6.01	70.50
	NORMAL	11,127.00	2.55	110.75	11,124.06	35.25	32.08	35.25	0.41	0.32	-5.95	-40.46
2/11/2012	NORMAL	11,222.00	2.59	105.91	11,218.96	33.92	36.12	33.92	0.23	0.04	-5.09	-81.98
	NORMAL	11,317.00	2.50	104.60	11,313.87	32.81	40.19	32.81	0.11	-0.09	-1.38	-147.78
	NORMAL	11,413.00	2.46	106.44	11,409.78	31.70	44.19	31.70	0.09	-0.04	1.92	117.59
	NORMAL	11,508.00	2.55	108.64	11,504.69	30.44	48.15	30.44	0.14	0.09	2.32	48.00
	NORMAL	11,604.00	2.72	110.04	11,600.59	28.98	52.31	28.98	0.19	0.18	1.46	21.44
2/12/2012	NORMAL	11,698.00	2.55	112.59	11,694.49	27.41	56.34	27.41	0.22	-0.18	2.71	146.68
2/13/2012	NORMAL	11,783.00	2.50	112.42	11,779.41	25.98	59.80	25.98	0.06	-0.06	-0.20	-171.57
	NORMAL	11,878.00	2.37	108.46	11,874.32	24.57	63.58	24.57	0.22	-0.14	-4.17	-129.66
	NORMAL	11,974.00	2.42	110.75	11,970.24	23.22	67.35	23.22	0.11	0.05	2.39	63.56
	NORMAL	12,003.00	2.15	114.53	11,999.21	22.78	68.42	22.78	1.07	-0.93	13.03	152.71
	NORMAL	12,061.00	2.15	114.53	12,057.17	21.87	70.40	21.87	0.00	0.00	0.00	0.00

Sundry Number: 34931 API Well Number: 43047405400000

FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
UTU-144867A

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
UTE

7.UNIT or CA AGREEMENT NAME:
NATURAL BUTTES

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
NBU 920-20D

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047405400000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6526

9. FIELD and POOL or WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0646 FNL 0686 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: NWNW Section: 20 Township: 09.0S Range: 20.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 2/22/2013	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	✓ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator requests authorization to recomplete the subject well. The operator requests approval to recomplete the Wasatch and Mesaverde formation. Please see the attached procedure. Thank you.

Accepted by the Utah Division of Oil, Gas and Mining

Date: March 05, 2013

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Lindsey Frazier	720 929-6857	Regulatory Analyst II
SIGNATURE		**DATE**
N/A		2/22/2013

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Greater Natural Buttes Unit

NBU 920-20D

FIELD ID: N/A

RECOMPLETE PROCEDURE

DATE: **02/15/2013**
AFE#:
API#: **4304740540**
USER ID: **WIU473** (Frac Invoices Only)

COMPLETIONS ENGINEER: **Patricia Cuba, Denver, CO**
(720) 929-6348 (Office)
(303) 907-9167 (Cell)

REMEMBER SAFETY FIRST!

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Name: **NBU 920-20D**
Location: **NW NW Sec 20 R9S R20E**
LAT: 40.02632 **LONG:** -109.69785 **COORDINATE:** NAD83 *(Surface Location)*
Uintah County, UT
Date: **02/15/2013**

ELEVATIONS: 4810' GL 4828' KB *Frac Registry TVD: 12057'*

TOTAL DEPTH: 12061' **PBTD:** 11450' (CIBP with cement plug on top)
SURFACE CASING: 8 5/8", 28# J-55 LTC @ 3024'
PRODUCTION CASING: 4 1/2", 11.6#, P-110 DQX LTC @ 5028'
4 1/2", 11.6#, P-110 LTC @ 5028-12061'
Marker Joint **5028-5041, 8689-8708, and 11378-11398**'

TUBULAR PROPERTIES:

	BURST (psi)	COLLAPSE (psi)	DRIFT DIA. (in.)	CAPACITIES (bbl./ft)	CAPACITIES (gal/ft)
2 3/8" 4.7# L-80 tbg	11,200	11,780	1.901"	0.00387	0.1624
4 ½" 11.6# I-80 (See above)	7780	6350	3.875"	0.0155	0.6528
4 ½" 11.6# P-110	10691	7580	3.875"	0.0155	0.6528
2 3/8" by 4 ½" Annulus				0.0101	0.4227

TOPS: **BOTTOMS:**

1828' Green River Top
2065' Bird's Nest Top
2555' Mahogany Top
5306' Wasatch Top — 8839' Wasatch Bottom
8839' Mesaverde Top — 12061' Mesaverde Bottom (TD)

T.O.C. @ 2500'

GENERAL NOTES:

- **Please note that:**
  - **All stages on this procedure may or may not be completed due to low frac gradients, timing, or other possible reasons. Total stages completed can be found in the post-job-report.**
  - **CBP depth on this procedure is only to be used as a reference. This depth is subject to change as per field operations and the discretion of the wireline supervisor and field foreman.**
- A minimum of **31** tanks (cleaned lined 500 bbl) of recycled water will be required. Note: Use biocide in tanks and the water needs to be at least 45°F at pump time.
- All perforation depths are from Schlumberger's GR log dated **02/29/2012**
- **11** fracturing stages required for coverage.
- Hydraulic isolation estimated at **2558'** based upon from Schlumberger's CBL dated 02/29/2012 **.**
- Procedure calls for **11** CBP's (**8000** psi) .
- Calculate open perforations after each breakdown. If less than 60% of the perforations appear to be open, ball out with 15% HCl.
- Pump scale inhibitor at 0.5 gpt. Remember to pre-load the casing with scale inhibitor.

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- This is a NO Clay stabilizer pilot *** Please Do NOT pump Clay Stabilizer ***
- FR will be pumped at 0.3 gpt for this well. This concentration will be raised or lowered on the job at the discretion of the APC foreman per the well's treating pressure.
- 30/50 mesh Ottawa sand, **Slickwater frac**.
- Maximum surface pressure **7000 psi**.
- **If casing pressure test fails (pressure loss of 1.5% psi or more), retest for 15 minutes. If pressure loss of 1.5% more on second test, notify Denver engineers. Record in Openwells. MIRU with tubing and packer. Isolate leak by pressure testing above and below the packer. RIH and set appropriate casing leak remediation. Re-pressure test to 1000 and 3500 psi for 15 minutes each and to 7000 psi for 30 minutes (specific details on remediation should be documented in OpenWells).**
- Flush volumes are the sum of slick water and acid used during displacement (include scale inhibitor as mentioned above). Stage acid and scale inhibitor if necessary to cover the next perforated interval.
- Call flush at 0 PPG @ inline densiometers. Slow to 5 bbl/min over last 10-20 bbls of flush. Flush to top perf.
- Max Sand Concentration: Mesaverde 1 ppg; Wasatch 2 ppg;
- If distance between plug and top perf of previous stage is less than 50', it is considered to be tight spacing - over flush stage by 5 bbls (from top perf)
- **TIGHT SPACING ON STAGE 1-4, 7– OVERFLUSH BY 5 BBLS**
- **If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work**

Existing Perforations:

PERFORATIONS

Formation	Zone	Top	Btm	spf	Shots	Date	Reason
MESAVERDE	LOWER	11462	11464	3	6	03/08/2012	PRODUCTION
MESAVERDE	LOWER	11478	11479	3	3		PRODUCTION
MESAVERDE	LOWER	11486	11487	3	3		PRODUCTION
MESAVERDE	LOWER	11503	11507	3	12		PRODUCTION
MESAVERDE	LOWER	11577	11579	3	6		PRODUCTION
MESAVERDE	LOWER	11628	11630	3	6		PRODUCTION
MESAVERDE	LOWER	11641	11643	3	6	03/08/2012	PRODUCTION
MESAVERDE	LOWER	11658	11660	3	6		PRODUCTION
MESAVERDE	LOWER	11718	11720	3	6		PRODUCTION
MESAVERDE	LOWER	11737	11738	3	3		PRODUCTION
MESAVERDE	LOWER	11748	11750	3	6		PRODUCTION
MESAVERDE	LOWER	11761	11763	3	6	03/08/2012	PRODUCTION
MESAVERDE	LOWER	11827	11828	3	3	03/08/2012	PRODUCTION

Relevant History:

2/16/2012: New drill, cemented w/ Class G Premium Lite (Lead) and Class G 50/50 POZ-Mix (Tail).

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3/9/2012: Completed in Blackhawk Formation (Discrete Balckhawk test, see perfs above).

10/15/2012: Well had been logged off for a few weeks due to high water production. During this time, casing pressure built up to 3600 psi. Cycling these high pressures on the casing has the potential to result in a failure like what occurred on the 35L1CS which resulted in a 600 BBL spill. According to the well P&L's the EBITDA for this well is -$40,000 YTD. Leaving this well until next year to be recompleted will result in a larger negative cash flow as well as potential EH&S concern.

1/23/2013: Set 10K CIBP @ 11,450' and pressure test to 3000 psi. Pumped 5 sxs of Class G cement to isolate BH formation.

2/15/2013: Tubing landed @ 11,087'

H2S History:

Production Date	Gas (avg mcf/day)	Water (avg bbl/day)	Oil (avg bbl/day)	LGR (bbl/Mmcf)	Max H2S Seperator (ppm)
2/29/2012	0.00	0.00	0.00	#NA	
3/31/2012	452.32	107.74	0.13	238.48	
4/30/2012	349.07	178.60	0.70	513.66	3.00
5/31/2012	226.84	114.45	1.32	510.38	1.00
6/30/2012	152.57	68.57	0.67	453.79	
7/31/2012	126.71	47.32	0.35	376.27	
8/31/2012	82.90	39.03	0.48	476.65	
9/30/2012	51.23	30.47	0.13	597.27	
10/31/2012	81.77	38.71	0.03	473.77	
11/30/2012	86.20	46.70	0.07	542.54	
12/31/2012	80.32	44.77	0.03	557.83	
1/31/2013	32.32	12.89	0.00	398.72	0.00

PROCEDURE: (If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work.)

1. MIRU. Control well with recycled water and biocide as required. ND WH, NU BOP's and test.

2. TOOH with 2-3/8", 4.7#, L-80 tubing. Visually inspect for scale and consider replacing if needed.

3. If tbg looks ok consider running a gauge ring to 10797 (30' below Stg 1bottom perfs).

4. ND BOPs and NU frac valves Test frac valves and casing to to **7000 psi** for 15 minutes; if pressure test fails contact Denver engineer and see notes above. **Lock OPEN the Braden head valve**. Flow from annulus will be visually monitored throughout stimulation. If release occurs, stimulation will be shut down. Well conditions will be assessed and actions taken as necessary to secure the well. UDOGM will be notified if a release to the annulus occurs.

5. Pressure test frac lines to max surface pressure + 1000 psi for 15 minutes. Pressure loss should be less than 10% to be considered acceptable. Check and correct for existing leaks.

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6. Perf the following with 3-3/8" gun, 23 gm, 0.36"hole:

Zone	From	To	spf	# of shots
MESAVERDE	10633	10634	3	3
MESAVERDE	10684	10685	3	3
MESAVERDE	10710	10711	3	3
MESAVERDE	10726	10727	3	3
MESAVERDE	10743	10744	3	3
MESAVERDE	10765	10767	3	6

7. Breakdown perfs and establish injection rate (include scale inhibitor in fluid). Spot 250 gals of 15% HCL and let soak 5-10 min. Fracture as outlined in Stage 1 on attached listing. Under-displace to ~10633' and trickle 250gal 15%HCL w/ scale inhibitor in flush . **NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS**

8. Set 8000 psi CBP at ~10611'. Perf the following 3-3/8" gun, 23 gm, 0.36"hole:

Zone	From	To	spf	# of shots
MESAVERDE	10426	10427	3	3
MESAVERDE	10456	10457	3	3
MESAVERDE	10500	10501	3	3
MESAVERDE	10526	10527	3	3
MESAVERDE	10542	10543	3	3
MESAVERDE	10563	10564	3	3
MESAVERDE	10580	10581	3	3

9. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 2 on attached listing. Under-displace to ~10426' and trickle 250gal 15%HCL w/ scale inhibitor in flush. **NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS**

10. Set 8000 psi CBP at ~10416'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
MESAVERDE	10215	10216	3	3
MESAVERDE	10232	10233	3	3
MESAVERDE	10249	10250	3	3
MESAVERDE	10300	10301	3	3
MESAVERDE	10321	10322	3	3
MESAVERDE	10333	10334	3	3
MESAVERDE	10376	10377	3	3
MESAVERDE	10396	10397	3	3

11. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 3 on attached listing. Under-displace to ~10215' and trickle 250gal 15%HCL w/ scale inhibitor in flush. **NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS**

12. Set 8000 psi CBP at ~10193'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
MESAVERDE	9872	9873	3	3
MESAVERDE	9934	9935	3	3
MESAVERDE	9997	9998	3	3
MESAVERDE	10075	10076	3	3
MESAVERDE	10105	10106	3	3

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MESAVERDE	10139	10140	3	3
MESAVERDE	10162	10163	3	3

13. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 4 on attached listing. Under-displace to ~9872' and trickle 250gal 15%HCL w/ scale inhibitor in flush. **NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS**

14. Set 8000 psi CBP at ~9861'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
MESAVERDE	9555	9556	3	3
MESAVERDE	9599	9600	3	3
MESAVERDE	9610	9611	3	3
MESAVERDE	9622	9623	3	3
MESAVERDE	9674	9675	3	3
MESAVERDE	9762	9763	3	3
MESAVERDE	9807	9808	3	3
MESAVERDE	9830	9831	3	3

15. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 5 on attached listing. Under-displace to ~9555' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

16. Set 8000 psi CBP at ~9168'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
MESAVERDE	8869	8870	3	3
MESAVERDE	8892	8893	3	3
MESAVERDE	8997	8998	3	3
MESAVERDE	9042	9043	3	3
MESAVERDE	9073	9074	3	3
MESAVERDE	9091	9092	3	3
MESAVERDE	9120	9121	3	3
MESAVERDE	9137	9138	3	3

17. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 6 on attached listing. Under-displace to ~8869' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

18. Set 8000 psi CBP at ~8564'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
WASATCH	8214	8215	3	3
WASATCH	8283	8284	3	3
WASATCH	8452	8454	3	6
WASATCH	8531	8534	3	9

19. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 7 on attached listing. Under-displace to ~8214' and trickle 250gal 15%HCL w/ scale inhibitor in flush. **NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS**

20. Set 8000 psi CBP at ~8167'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
WASATCH	7850	7851	3	3
WASATCH	7923	7924	3	3
WASATCH	7963	7964	3	3

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WASATCH	7994	7995	3	3
WASATCH	8013	8014	3	3
WASATCH	8094	8095	3	3
WASATCH	8110	8111	3	3
WASATCH	8136	8137	3	3

21. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 8 on attached listing. Under-displace to ~7850' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

22. Set 8000 psi CBP at ~7755'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
WASATCH	7466	7467	3	3
WASATCH	7526	7527	3	3
WASATCH	7554	7555	3	3
WASATCH	7632	7633	3	3
WASATCH	7646	7647	3	3
WASATCH	7660	7661	3	3
WASATCH	7724	7725	3	3

23. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 9 on attached listing. Under-displace to ~7466' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

24. Set 8000 psi CBP at ~7394'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
WASATCH	7164	7165	3	3
WASATCH	7300	7302	3	6
WASATCH	7344	7346	3	6
WASATCH	7362	7364	3	6

25. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 10 on attached listing. Under-displace to ~7164' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

26. Set 8000 psi CBP at ~6998'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
WASATCH	6820	6821	3	3
WASATCH	6890	6891	3	3
WASATCH	6920	6921	3	3
WASATCH	6944	6946	3	6
WASATCH	6966	6968	3	6

27. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 11 on attached listing. Under-displace to ~6820' and flush only with recycled water.

28. Set 8000 psi CBP at~6770'.

29. ND Frac Valves, NU and Test BOPs.

30. TIH with 3 7/8" bit, pump off sub, SN and tubing.

31. MIRU, POOH tbg and POBS. TIH with POBS.

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32. Clean out to top of cement plug (Please tag and record in OpenWells). Shear off bit and land tubing at ±10396'.

33. Clean out well with foam and/or swabbing unit until steady flow has been established from completion.

34. **Leave surface casing valve open**. Monitor and report any flow from surface casing. RDMO

Completion Engineer

Patricia Cuba: 303/601-7259, 720/929-6348

Production Engineer

Jesse Markeveys: 215/380-0781, 435/781-7055

Laura M. Wellman: 435/781-9748, 435/322-0118

Completion Supervisor Foreman

Jeff Samuels: 435/828-6515, 435/781-7046

Completion Manager

Jeff Dufresne: 720/929-6281, 303/241-8428

Vernal Main Office

435/789-3342

Emergency Contact Information—Call 911

Vernal Regional Hospital Emergency: 435-789-3342

Police: (435) 789-5835

Fire: 435-789-4222

Total Stages	11	stages
Last Stage Flush	4,452	gals

Service Company Supplied Chemicals - Job Totals

Friction Reducer	171	gals @	0.3	GPT
Surfactant	570	gals @	1.0	GPT
Clay Stabilizer	0	gals @	0.0	GPT
15% Hcl	2750	gals @	250	gal/stg
Iron Control for acid	14	gals @	5.0	GPT of acid
Surfactant for acid	6	gals @	2.0	GPT of acid
Corrosion Inhibitor for acid	17	gals @	6.0	GPT of acid

Third Party Supplied Chemicals Job Totals - Include Pumping Charge if Applicable

Scale Inhibitor	285	gals pumped	0.5	GPT (see schedule)
Biocide	171	gals @	0.3	GPT

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Sundry Number: 34931 API Well Number: 43047405400000

Fracturing Schedules

Name NBU 920-20D

Slickwater Frac

Copy to new book

Casing Size	4.5
Recomplete?	Y
Pad?	N
ACTS?	N

Swabbing Days	3	Enter Number of swabbing days here for recompletes
Production Log	0	Enter 1 if running a Production Log
DFIT	0	Enter Number of DFITs
GR only	Y	Enter Y if only Gamma Ray log was run
Low Scale	Y	Enter Y if a LOW concentration of Scale Inhibitor will be pumped
Clay Stab.	Y	Enter N if there will be NO Clay stabilizer

Stage	Zone	Perfs Top, ft.	Perfs Bot., ft	SPF	Holes	Rate BPM	Fluid Type	Initial ppg	Final ppg	Fluid	Volume gals	Cum Vol gals	Volume BBLs	Cum Vol BBLs	Fluid % of frac	Sand % of frac	Sand lbs	Cum. Sand lbs	Footage from CBP to Flush	Scale Inhib., gal.
1	MESAVERDE	10633	10634	3	3	Varied	Pre-Pad & Pump-in test			Slickwater	6,941	6,941	165	165						3
	MESAVERDE	10684	10685	3	3	0	ISIP and 5 min ISIP													
	MESAVERDE	10710	10711	3	3	50	Slickwater Pad			Slickwater	5,957	12,898	142	307	15.0%	0.0%	0	0		3
	MESAVERDE	10726	10727	3	3	50	Slickwater Ramp	0.25	0.625	Slickwater	11,253	24,151	268	575	28.3%	21.9%	4,923	4,923		6
	MESAVERDE	10743	10744	3	3	50	SW Sweep	0	0	Slickwater	0	24,151	0	575		0.0%	0	4,923		0
	MESAVERDE	10765	10767	3	6	50	Slickwater Ramp	0.63	0.75	Slickwater	11,253	35,404	268	843	28.3%	34.4%	7,736	12,659		6
	MESAVERDE					50	SW Sweep	0	0	Slickwater	0	35,404	0	843		0.0%	0	12,659		0
	MESAVERDE					50	Slickwater Ramp	0.25	0.75	Slickwater	0	35,404	0	843		0.0%	0	12,659		0
	MESAVERDE					50	Slickwater Ramp	0.75	1	Slickwater	11,253	46,656	268	1,111	28.3%	43.8%	9,846	22,505		6
	MESAVERDE					50	Flush (4-1/2)				6,941	53,597	165	1,276				22,505		3
	MESAVERDE						ISDP and 5 min ISDP					53,597								27
	MESAVERDE																			
	MESAVERDE																			
	MESAVERDE									Sand laden Volume		39,715								
			# of Perfs/stage		21											gal/ft	470	266	lbs sand/ft	
						25.5	<< Above pump time (min)							Flush depth	10,633		CBP depth	10,611	22	
2	MESAVERDE	10426	10427	3	3	Varied	Pump-in test			Slickwater		0	0	0						
	MESAVERDE	10456	10457	3	3	0	ISIP and 5 min ISIP													
	MESAVERDE	10500	10501	3	3	50	Slickwater Pad			Slickwater	5,957	5,957	142	142	15.0%	0.0%	0	0		3
	MESAVERDE	10526	10527	3	3	50	Slickwater Ramp	0.25	0.625	Slickwater	11,253	17,210	268	410	28.3%	21.9%	4,923	4,923		6
	MESAVERDE	10542	10543	3	3	50	SW Sweep	0	0	Slickwater	0	17,210	0	410		0.0%	0	4,923		0
	MESAVERDE	10563	10564	3	3	50	Slickwater Ramp	0.63	0.75	Slickwater	11,253	28,462	268	678	28.3%	34.4%	7,736	12,659		6
	MESAVERDE	10580	10581	3	3	50	SW Sweep	0	0	Slickwater	0	28,462	0	678		0.0%	0	12,659		0
	MESAVERDE					50	Slickwater Ramp	0.25	0.75	Slickwater	0	28,462	0	678		0.0%	0	12,659		0
	MESAVERDE					50	Slickwater Ramp	0.75	1	Slickwater	11,253	39,715	268	946	28.3%	43.8%	9,846	22,505		6
	MESAVERDE					50	Flush (4-1/2)				6,806	46,521	162	1,108				22,505		3
	MESAVERDE						ISDP and 5 min ISDP					46,521								23
	MESAVERDE																			
	MESAVERDE																			
	MESAVERDE									Sand laden Volume		39,715								
			# of Perfs/stage		21											gal/ft	470	266	lbs sand/ft	
						22.2	<< Above pump time (min)							Flush depth	10,426		CBP depth	10,416	10	
3	MESAVERDE	10215	10216	3	3	Varied	Pump-in test			Slickwater		0	0	0						
	MESAVERDE	10232	10233	3	3	0	ISIP and 5 min ISIP													
	MESAVERDE	10249	10250	3	3	50	Slickwater Pad			Slickwater	9,000	9,000	214	214	15.0%	0.0%	0	0		5
	MESAVERDE	10300	10301	3	3	50	Slickwater Ramp	0.25	0.625	Slickwater	17,000	26,000	405	619	28.3%	21.9%	7,438	7,438		9
	MESAVERDE	10321	10322	3	3	50	SW Sweep	0	0	Slickwater	0	26,000	0	619		0.0%	0	7,438		0
	MESAVERDE	10333	10334	3	3	50	Slickwater Ramp	0.63	0.75	Slickwater	17,000	43,000	405	1,024	28.3%	34.4%	11,688	19,125		9
	MESAVERDE	10376	10377	3	3	50	SW Sweep	0	0	Slickwater	0	43,000	0	1,024		0.0%	0	19,125		0
	MESAVERDE	10396	10397	3	3	50	Slickwater Ramp	0.25	0.75	Slickwater	0	43,000	0	1,024		0.0%	0	19,125		0
	MESAVERDE					50	Slickwater Ramp	0.75	1	Slickwater	17,000	60,000	405	1,429	28.3%	43.8%	14,875	34,000		9
	MESAVERDE					50	Flush (4-1/2)				6,668	66,668	159	1,587				34,000		3
	MESAVERDE						ISDP and 5 min ISDP					66,668								33
	MESAVERDE																			
	MESAVERDE																			
	MESAVERDE									Sand laden Volume		60,000								
			# of Perfs/stage		24											gal/ft	480	272	lbs sand/ft	
						31.7	<< Above pump time (min)							Flush depth	10,215		CBP depth	10,193	22	

4	MESAVERDE	9872	9873	3	3	Varied	Pump-in test			Slickwater		0	0	0						
	MESAVERDE	9934	9935	3	3	0	ISIP and 5 min ISIP													
	MESAVERDE	9997	9998	3	3	50	Slickwater Pad			Slickwater	10,710	10,710	255	255	15.0%	0.0%	0	0		5
	MESAVERDE	10075	10076	3	3	50	Slickwater Ramp	0.25	0.625	Slickwater	20,230	30,940	482	737	28.3%	21.9%	8,851	8,851		10
	MESAVERDE	10105	10106	3	3	50	SW Sweep	0	0	Slickwater	0	30,940	0	737		0.0%	0	8,851		0
	MESAVERDE	10139	10140	3	3	50	Slickwater Ramp	0.63	0.75	Slickwater	20,230	51,170	482	1,218	28.3%	34.4%	13,908	22,759		10
	MESAVERDE	10162	10163	3	3	50	SW Sweep	0	0	Slickwater	0	51,170	0	1,218		0.0%	0	22,759		0
	MESAVERDE					50	Slickwater Ramp	0.25	0.75	Slickwater	0	51,170	0	1,218		0.0%	0	22,759		0
	MESAVERDE					50	Slickwater Ramp	0.75	1	Slickwater	20,230	71,400	482	1,700	28.3%	43.8%	17,701	40,460		10
	MESAVERDE					50	Flush (4-1/2)				6,444	77,844	153	1,853				40,460		3
	MESAVERDE						ISDP and 5 min ISDP					77,844								39
	MESAVERDE																			
	MESAVERDE																			
	MESAVERDE									Sand laden Volume		71,400								
																gal/ft	400	227	lbs sand/ft	
			# of Perfs/stage		21									Flush depth	9,872		CBP depth	9,861	11	
						37.1	<< Above pump time (min)													
5	MESAVERDE	9555	9556	3	3	Varied	Pump-in test			Slickwater		0	0	0						
	MESAVERDE	9599	9600	3	3	0	ISIP and 5 min ISIP													
	MESAVERDE	9610	9611	3	3	50	Slickwater Pad			Slickwater	11,808	11,808	281	281	15.0%	0.0%	0	0		6
	MESAVERDE	9622	9623	3	3	50	Slickwater Ramp	0.25	0.625	Slickwater	22,304	34,112	531	812	28.3%	21.9%	9,758	9,758		11
	MESAVERDE	9674	9675	3	3	50	SW Sweep	0	0	Slickwater	0	34,112	0	812		0.0%	0	9,758		0
	MESAVERDE	9762	9763	3	3	50	Slickwater Ramp	0.63	0.75	Slickwater	22,304	56,416	531	1,343	28.3%	34.4%	15,334	25,092		11
	MESAVERDE	9807	9808	3	3	50	SW Sweep	0	0	Slickwater	0	56,416	0	1,343		0.0%	0	25,092		0
	MESAVERDE	9830	9831	3	3	50	Slickwater Ramp	0.25	0.75	Slickwater	0	56,416	0	1,343		0.0%	0	25,092		0
	MESAVERDE					50	Slickwater Ramp	0.75	1	Slickwater	22,304	78,720	531	1,874	28.3%	43.8%	19,516	44,608		11
	MESAVERDE					50	Flush (4-1/2)				6,238	84,958	149	2,023				44,608		3
	MESAVERDE						ISDP and 5 min ISDP					84,958								42
	MESAVERDE																			
	MESAVERDE																			
	MESAVERDE									Sand laden Volume		78,720								
																gal/ft	640	363	lbs sand/ft	
			# of Perfs/stage		24									Flush depth	9,555		CBP depth	9,168	387	
						40.5	<< Above pump time (min)													
6	MESAVERDE	8869	8870	3	3	Varied	Pump-in test			Slickwater		0	0	0						
	MESAVERDE	8892	8893	3	3	0	ISIP and 5 min ISIP													
	MESAVERDE	8997	8998	3	3	50	Slickwater Pad			Slickwater	8,484	8,484	202	202	15.0%	0.0%	0	0		4
	MESAVERDE	9042	9043	3	3	50	Slickwater Ramp	0.25	0.625	Slickwater	16,025	24,509	382	584	28.3%	21.9%	7,011	7,011		8
	MESAVERDE	9073	9074	3	3	50	SW Sweep	0	0	Slickwater	0	24,509	0	584		0.0%	0	7,011		0
	MESAVERDE	9091	9092	3	3	50	Slickwater Ramp	0.63	0.75	Slickwater	16,025	40,535	382	965	28.3%	34.4%	11,017	18,029		8
	MESAVERDE	9120	9121	3	3	50	SW Sweep	0	0	Slickwater	0	40,535	0	965		0.0%	0	18,029		0
	MESAVERDE	9137	9138	3	3	50	Slickwater Ramp	0.25	0.75	Slickwater	0	40,535	0	965		0.0%	0	18,029		0
	MESAVERDE					50	Slickwater Ramp	0.75	1	Slickwater	16,025	56,560	382	1,347	28.3%	43.8%	14,022	32,051		8
	MESAVERDE					50	Flush (4-1/2)				5,790	62,350	138	1,485				32,051		3
	MESAVERDE						ISDP and 5 min ISDP					62,350								31
	MESAVERDE																			
	MESAVERDE																			
	MESAVERDE									Sand laden Volume		56,560								
																gal/ft	560	317	lbs sand/ft	
			# of Perfs/stage		24									Flush depth	8,869		CBP depth	8,564	305	
						29.7														

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7	WASATCH	8214	8215	3	3	Varied	Pump-in test			Slickwater		0	0	0						
	WASATCH	8283	8284	3	3	0	ISIP and 5 min ISIP													
	WASATCH	8452	8454	3	6	50	Slickwater Pad			Slickwater	3,229	3,229	77	77	15.0%	0.0%	0	0		2
	WASATCH	8531	8534	3	9	50	Slickwater Ramp	0.25	1	Slickwater	10,763	13,991	256	333	50.0%	37.3%	6,727	6,727		5
	WASATCH					50	Slickwater Ramp	1	2	Slickwater	7,534	21,525	179	513	35.0%	62.7%	11,301	18,027		4
	WASATCH					50	Flush (4-1/2)			Slickwater	5,362	26,887	128	640				18,027		3
	WASATCH						ISDP and 5 min ISDP			Slickwater										0
	WASATCH																			0
	WASATCH																	18,027		0
	WASATCH											26,887	128	640						0
	WASATCH																			13
	WASATCH																			
	WASATCH									Sand laden Volume		21,525								
																gal/ft	410	343	lbs sand/ft	
			# of Perfs/stage		21									Flush depth	8,214		CBP depth	8,167	47	
						12.8														
8	WASATCH	7850	7851	3	3	Varied	Pump-in test			Slickwater		0	0	0						
	WASATCH	7923	7924	3	3	0	ISIP and 5 min ISIP													
	WASATCH	7963	7964	3	3	50	Slickwater Pad			Slickwater	7,134	7,134	170	170	15.0%	0.0%	0	0		4
	WASATCH	7994	7995	3	3	50	Slickwater Ramp	0.25	1	Slickwater	23,780	30,914	566	736	50.0%	37.3%	14,863	14,863		12
	WASATCH	8013	8014	3	3	50	Slickwater Ramp	1	2	Slickwater	16,646	47,560	396	1,132	35.0%	62.7%	24,969	39,832		8
	WASATCH	8094	8095	3	3	50	Flush (4-1/2)			Slickwater	5,124	52,684	122	1,254				39,832		3
	WASATCH	8110	8111	3	3		ISDP and 5 min ISDP			Slickwater										0
	WASATCH	8136	8137	3	3															0
	WASATCH																	39,832		0
	WASATCH											52,684	122	1,254						0
	WASATCH																			26
	WASATCH																			
	WASATCH																			
	WASATCH									Sand laden Volume		47,560								
																gal/ft	410	343	lbs sand/ft	
			# of Perfs/stage		24									Flush depth	7,850		CBP depth	7,755	95	
						25.1														
9	WASATCH	7466	7467	3	3	Varied	Pump-in test			Slickwater		0	0	0						
	WASATCH	7526	7527	3	3	0	ISIP and 5 min ISIP													
	WASATCH	7554	7555	3	3	50	Slickwater Pad			Slickwater	3,810	3,810	91	91	15.0%	0.0%	0	0		2
	WASATCH	7632	7633	3	3	50	Slickwater Ramp	0.25	1	Slickwater	12,700	16,510	302	393	50.0%	37.3%	7,938	7,938		6
	WASATCH	7646	7647	3	3	50	Slickwater Ramp	1	2	Slickwater	8,890	25,400	212	605	35.0%	62.7%	13,335	21,273		4
	WASATCH	7660	7661	3	3	50	Flush (4-1/2)			Slickwater	4,874	30,274	116	721				21,273		2
	WASATCH	7724	7725	3	3		ISDP and 5 min ISDP			Slickwater										0
	WASATCH																			0
	WASATCH																	21,273		0
	WASATCH											30,274	116	721						0
	WASATCH																			15
	WASATCH																			
	WASATCH																			
	WASATCH									Sand laden Volume		25,400								
																gal/ft	400	335	lbs sand/ft	
			# of Perfs/stage		21									Flush depth	7,466		CBP depth	7,394	72	
						14.4														

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10	WASATCH	7164	7165	3	3	Varied	Pump-in test			Slickwater		0	0	0						
	WASATCH	7300	7302	3	6	0	ISIP and 5 min ISIP													
	WASATCH	7344	7346	3	6	50	Slickwater Pad			Slickwater	3,060	3,060	73	73	15.0%	0.0%	0	0		2
	WASATCH	7362	7364	3	6	50	Slickwater Ramp	0.25	1	Slickwater	10,200	13,260	243	316	50.0%	37.3%	6,375	6,375		5
	WASATCH					50	Slickwater Ramp	1	2	Slickwater	7,140	20,400	170	486	35.0%	62.7%	10,710	17,085		4
	WASATCH					50	Flush (4-1/2)			Slickwater	4,677	25,077	111	597				17,085		2
	WASATCH						ISDP and 5 min ISDP			Slickwater										0
	WASATCH																			0
	WASATCH																	17,085		0
	WASATCH											25,077	111	597						0
	WASATCH																			13
	WASATCH																			
	WASATCH																			
	WASATCH									Sand laden Volume		20,400								
																gal/md-ft	800	670	lbs sand/ft	
			# of Perfs/stage		21									Flush depth	7,164		CBP depth	6,998	166	
						11.9														
11	WASATCH	6820	6821	3	3	Varied	Pump-in test			Slickwater		0	0	0						
	WASATCH	6890	6891	3	3	0	ISIP and 5 min ISIP													
	WASATCH	6920	6921	3	3	50	Slickwater Pad			Slickwater	6,503	6,503	155	155	15.0%	0.0%	0	0		3
	WASATCH	6944	6946	3	6	50	Slickwater Ramp	0.25	1	Slickwater	21,678	28,181	516	671	50.0%	37.3%	13,548	13,548		11
	WASATCH	6966	6968	3	6	50	Slickwater Ramp	1	2	Slickwater	15,174	43,355	361	1,032	35.0%	62.7%	22,761	36,310		8
	WASATCH					50	Flush (4-1/2)			Slickwater	4,452	47,807	106	1,138				36,310		0
	WASATCH						ISDP and 5 min ISDP			Slickwater										0
	WASATCH																			0
	WASATCH																	36,310		0
	WASATCH											47,807	106	1,138						0
	WASATCH																			22
	WASATCH																			
	WASATCH																			
	WASATCH									Sand laden Volume		43,355								
																gal/md-ft	290	243	lbs sand/ft	
			# of Perfs/stage		21									Flush depth	6,820		CBP depth	6,770	50	
						22.8														
	Totals				243						Total Fluid	574,668	gals	13,683	bbls		Total Sand	328,655		
												13,683	bbls							
						4.6								30.4	tanks				Total Scale Inhib. =	285

Name NBU 920-20D
Perforation and CBP Summary

Stage	Zones	Perforations Top, ft	Perforations Bottom, ft	SPF	Holes		Fracture Coverage		
1	MESAVERDE	10633	10634	3	3		10628.5	to	10779.5
	MESAVERDE	10684	10685	3	3				
	MESAVERDE	10710	10711	3	3				
	MESAVERDE	10726	10727	3	3				
	MESAVERDE	10743	10744	3	3				
	MESAVERDE	10765	10767	3	6				
	MESAVERDE								
	MESAVERDE								
	# of Perfs/stage				21		CBP DEPTH	10,611	
2	MESAVERDE	10426	10427	3	3		10426	to	10591
	MESAVERDE	10456	10457	3	3				
	MESAVERDE	10500	10501	3	3				
	MESAVERDE	10526	10527	3	3				
	MESAVERDE	10542	10543	3	3				
	MESAVERDE	10563	10564	3	3				
	MESAVERDE	10580	10581	3	3				
	MESAVERDE								
	# of Perfs/stage				21		CBP DEPTH	10,416	
3	MESAVERDE	10215	10216	3	3		10207	to	10407
	MESAVERDE	10232	10233	3	3				
	MESAVERDE	10249	10250	3	3				
	MESAVERDE	10300	10301	3	3				
	MESAVERDE	10321	10322	3	3				
	MESAVERDE	10333	10334	3	3				
	MESAVERDE	10376	10377	3	3				
	MESAVERDE	10396	10397	3	3				
	# of Perfs/stage				24		CBP DEPTH	10,193	
4	MESAVERDE	9872	9873	3	3		9870	to	10169
	MESAVERDE	9934	9935	3	3				
	MESAVERDE	9997	9998	3	3				
	MESAVERDE	10075	10076	3	3				
	MESAVERDE	10105	10106	3	3				
	MESAVERDE	10139	10140	3	3				
	MESAVERDE	10162	10163	3	3				
	MESAVERDE								
	# of Perfs/stage				21		CBP DEPTH	9,861	
5	MESAVERDE	9555	9556	3	3		9549	to	9842
	MESAVERDE	9599	9600	3	3				
	MESAVERDE	9610	9611	3	3				
	MESAVERDE	9622	9623	3	3				
	MESAVERDE	9674	9675	3	3				
	MESAVERDE	9762	9763	3	3				
	MESAVERDE	9807	9808	3	3				
	MESAVERDE	9830	9831	3	3				
	# of Perfs/stage				24		CBP DEPTH	9,168	
6	MESAVERDE	8869	8870	3	3		8867	to	9147
	MESAVERDE	8892	8893	3	3				
	MESAVERDE	8997	8998	3	3				
	MESAVERDE	9042	9043	3	3				
	MESAVERDE	9073	9074	3	3				
	MESAVERDE	9091	9092	3	3				
	MESAVERDE	9120	9121	3	3				
	MESAVERDE	9137	9138	3	3				
	# of Perfs/stage				24		CBP DEPTH	8,564	
7	WASATCH	8214	8215	3	3		8212	to	8537
	WASATCH	8283	8284	3	3				
	WASATCH	8452	8454	3	6				
	WASATCH	8531	8534	3	9				
	WASATCH								
	# of Perfs/stage				21		CBP DEPTH	8,167	
8	WASATCH	7850	7851	3	3		7839	to	8139
	WASATCH	7923	7924	3	3				
	WASATCH	7963	7964	3	3				
	WASATCH	7994	7995	3	3				
	WASATCH	8013	8014	3	3				
	WASATCH	8094	8095	3	3				
	WASATCH	8110	8111	3	3				
	WASATCH	8136	8137	3	3				
	# of Perfs/stage				24		CBP DEPTH	7,755	
9	WASATCH	7466	7467	3	3		7464	to	7730
	WASATCH	7526	7527	3	3				
	WASATCH	7554	7555	3	3				
	WASATCH	7632	7633	3	3				
	WASATCH	7646	7647	3	3				
	WASATCH	7660	7661	3	3				
	WASATCH	7724	7725	3	3				
	WASATCH								
	# of Perfs/stage				21		CBP DEPTH	7,394	
10	WASATCH	7164	7165	3	3		7162	to	7471
	WASATCH	7300	7302	3	6				
	WASATCH	7344	7346	3	6				
	WASATCH	7362	7364	3	6				
	WASATCH								
	# of Perfs/stage				21		CBP DEPTH	6,998	
11	WASATCH	6820	6821	3	3		6814	to	6975
	WASATCH	6890	6891	3	3				
	WASATCH	6920	6921	3	3				
	WASATCH	6944	6946	3	6				
	WASATCH	6966	6968	3	6				
	WASATCH								
	WASATCH								
	WASATCH								
	# of Perfs/stage				21		CBP DEPTH	6,770	
	Totals				243				Total

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NBU 920-20D

	Date/Time	Station Type	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usf	TFace (°)	Build (°/100usf	Turn (°/100usf
1	02/05/2012 00:01	NORMAL	3,005.00	0.50	92.63	3,004.77	-6.42	18.98	-6.42	0.09	-153.31	-0.08	-4.99
2	02/05/2012 00:01	NORMAL	3,122.00	0.57	71.37	3,121.77	-6.24	19.55	-6.24	0.50	71.37	0.50	0.00
3	02/05/2012 00:01	NORMAL	3,217.00	1.32	354.38	3,216.76	-5.00	19.89	-5.00	1.38	-101.97	0.79	-81.04
4	02/05/2012 00:01	NORMAL	3,311.00	1.32	353.85	3,310.73	-2.85	19.67	-2.85	0.01	-90.26	0.00	-0.56
5	02/05/2012 00:01	NORMAL	3,407.00	1.19	354.20	3,406.71	-0.75	19.45	-0.75	0.14	176.80	-0.14	0.36
6	02/05/2012 00:01	NORMAL	3,502.00	2.07	342.52	3,501.67	1.86	18.83	1.86	0.99	-26.59	0.93	-12.29
7	02/05/2012 00:01	NORMAL	3,598.00	1.71	349.46	3,597.62	4.93	18.05	4.93	0.44	150.99	-0.37	7.23
8	02/05/2012 00:01	NORMAL	3,693.00	1.58	354.20	3,692.58	7.62	17.66	7.62	0.20	136.05	-0.14	4.99
9	02/05/2012 00:01	NORMAL	3,788.00	1.71	324.50	3,787.54	10.08	16.70	10.08	0.90	-96.37	0.14	-31.26
10	02/05/2012 00:01	NORMAL	3,884.00	1.27	326.70	3,883.51	12.13	15.29	12.13	0.46	173.69	-0.46	2.29
11	02/05/2012 00:01	NORMAL	3,979.00	2.29	308.06	3,978.46	14.18	13.21	14.18	1.22	-39.12	1.07	-19.62
12	02/05/2012 00:01	NORMAL	4,075.00	2.29	313.60	4,074.39	16.69	10.31	16.69	0.23	92.77	0.00	5.77
13	02/05/2012 00:01	NORMAL	4,170.00	1.89	322.30	4,169.32	19.24	7.98	19.24	0.54	145.87	-0.42	9.16
14	02/05/2012 00:01	NORMAL	4,266.00	1.45	325.38	4,265.28	21.49	6.32	21.49	0.47	170.01	-0.46	3.21
15	02/05/2012 00:01	NORMAL	4,360.00	1.80	315.80	4,359.25	23.53	4.62	23.53	0.47	-42.67	0.37	-10.19
16	02/05/2012 00:01	NORMAL	4,456.00	1.14	305.60	4,455.21	25.16	2.79	25.16	0.74	-163.42	-0.69	-10.62
17	02/05/2012 00:01	NORMAL	4,552.00	1.80	307.80	4,551.18	26.64	0.82	26.64	0.69	5.99	0.69	2.29
1	02/07/2012 00:01	NORMAL	6,935.00	1.10	63.81	6,933.18	80.95	-33.81	80.95	1.32	124.89	0.00	73.45
2	02/07/2012 00:01	NORMAL	7,030.00	1.05	69.79	7,028.16	81.65	-32.18	81.65	0.13	116.99	-0.05	6.29
3	02/07/2012 00:01	NORMAL	7,126.00	1.14	64.52	7,124.14	82.37	-30.49	82.37	0.14	-50.87	0.09	-5.49
4	02/07/2012 00:01	NORMAL	7,221.00	1.41	69.76	7,219.12	83.18	-28.54	83.18	0.31	25.99	0.28	5.52
5	02/07/2012 00:01	NORMAL	7,316.00	1.36	74.98	7,314.09	83.88	-26.35	83.88	0.14	114.21	-0.05	5.49
6	02/07/2012 00:01	NORMAL	7,411.00	1.54	80.34	7,409.06	84.38	-24.00	84.38	0.24	39.70	0.19	5.64
7	02/07/2012 00:01	NORMAL	7,506.00	1.32	79.46	7,504.03	84.80	-21.67	84.80	0.23	-174.74	-0.23	-0.93
8	02/07/2012 00:01	NORMAL	7,602.00	1.58	121.82	7,600.00	84.30	-19.46	84.30	1.12	98.14	0.27	44.12
9	02/07/2012 00:01	NORMAL	7,697.00	1.41	114.62	7,694.97	83.12	-17.28	83.12	0.27	-136.71	-0.18	-7.58
10	02/07/2012 00:01	NORMAL	7,792.00	1.67	161.46	7,789.94	81.32	-15.78	81.32	1.31	102.38	0.27	49.31
11	02/07/2012 00:01	NORMAL	7,887.00	1.41	163.04	7,884.91	78.89	-15.00	78.89	0.28	171.51	-0.27	1.66
12	02/07/2012 00:01	NORMAL	7,982.00	1.41	161.37	7,979.88	76.67	-14.29	76.67	0.04	-90.83	0.00	-1.76
13	02/07/2012 00:01	NORMAL	8,077.00	1.27	162.34	8,074.85	74.56	-13.59	74.56	0.15	171.28	-0.15	1.02
14	02/07/2012 00:01	NORMAL	8,172.00	1.32	153.99	8,169.83	72.57	-12.79	72.57	0.21	-79.36	0.05	-8.79
15	02/07/2012 00:01	NORMAL	8,268.00	1.01	150.04	8,265.81	70.84	-11.89	70.84	0.33	-167.45	-0.32	-4.11
16	02/07/2012 00:01	NORMAL	8,364.00	1.14	138.17	8,361.79	69.40	-10.83	69.40	0.27	-65.75	0.14	-12.36
17	02/07/2012 00:01	NORMAL	8,459.00	1.01	136.15	8,456.77	68.09	-9.62	68.09	0.14	-164.76	-0.14	-2.13
1	02/10/2012 00:01	NORMAL	10,365.00	0.75	109.43	10,362.41	42.12	11.01	42.12	0.73	-43.69	0.72	-42.09
2	02/10/2012 00:01	NORMAL	10,460.00	1.19	101.08	10,457.39	41.72	12.56	41.72	0.49	-22.01	0.46	-8.79
3	02/10/2012 00:01	NORMAL	10,555.00	1.32	106.75	10,552.37	41.22	14.58	41.22	0.19	46.55	0.14	5.97
4	02/10/2012 00:01	NORMAL	10,650.00	1.45	106.79	10,647.34	40.55	16.77	40.55	0.14	0.45	0.14	0.04
5	02/10/2012 00:01	NORMAL	10,745.00	1.67	99.41	10,742.31	39.98	19.29	39.98	0.31	-46.13	0.23	-7.77
6	02/10/2012 00:01	NORMAL	10,840.00	1.71	106.53	10,837.27	39.35	22.02	39.35	0.22	82.79	0.04	7.49
7	02/10/2012 00:01	NORMAL	10,936.00	2.15	110.75	10,933.21	38.31	25.07	38.31	0.48	20.02	0.46	4.40
8	02/10/2012 00:01	NORMAL	11,031.00	2.24	116.46	11,028.14	36.85	28.40	36.85	0.25	70.50	0.09	6.01
9	02/10/2012 00:01	NORMAL	11,127.00	2.55	110.75	11,124.06	35.25	32.08	35.25	0.41	-40.46	0.32	-5.95
1	02/13/2012 00:01	NORMAL	11,783.00	2.50	112.42	11,779.41	25.98	59.80	25.98	0.06	-171.57	-0.06	-0.20
2	02/13/2012 00:01	NORMAL	11,878.00	2.37	108.46	11,874.32	24.57	63.58	24.57	0.22	-129.66	-0.14	-4.17
3	02/13/2012 00:01	NORMAL	11,974.00	2.42	110.75	11,970.24	23.22	67.35	23.22	0.11	63.56	0.05	2.39
4	02/13/2012 00:01	NORMAL	12,003.00	2.15	114.53	11,999.21	22.78	68.42	22.78	1.07	152.71	-0.93	13.03
5	02/13/2012 00:01	NORMAL	12,061.00	2.15	114.53	12,057.17	21.87	70.40	21.87	0.00	0.00	0.00	0.00

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Acid Pickling and H2S Procedures (If Required)

**PROCEDURE FOR PUMPING ACID DOWN TBG

WHEN FINDING SCALE IN TUBING THAT IS ACID SOLUBLE, ENSURE THAT PLUNGER EQUIPMENT IS REMOVED AND ABLE TO PUMP DOWN TBG. INSTALL A 'T' IN PUMP LINE W/2" VALVE THAT NALCO CAN TIE INTO. HAVE 60 BBLS 2% KCL MIXED W/ 10-15 GAL H2S SCAVENGER IN RIG FLAT TANK. (WE USED THE RIG FLAT TANK FOR MIXING CHEMICAL SO WE DIDN'T HAVE THE CHEMICAL IN ALL FLUIDS ON LOCATION, ONLY WHAT WE NEEDED TO PUMP DOWN HOLE)

1. PUMP 5-10 BBLS 2% KCL DOWN TBG (NALCO CANNOT PUMP AGAINST PRESSURE)
2. NALCO WILL PUMP 3 DRUMS HCL (31%) INTO PUMP LINE.
3. FLUSH BEHIND ACID WITH 10-15 BBL 2% KCL
4. PUMP 2—30 BBL 2% W/ H2S SCAVENGER DOWN TBG.
5. PUMP REMAINDER OF 2% W/ H2S SCAVENGER DOWN CASING AND SHUT WELL IN FOR MINIMUM OF 2 HRS.
6. OVER DISPLACE DOWN TBG AND CSG TO FLUSH ACID AND SCAVENGER INTO FORMATION
7. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

** PROCEDURE FOR PUMPING H2S SCAVENGER WITHOUT ACID

PRIOR TO RIG MOVING ON OR AS RIG PULLS ONTO LOCATION. TEST CASING, TUBING AND SEPARATOR FOR H2S. IF FOUND MAKE SURE THAT PLUNGER SYSTEM IS REMOVED (IT IS POSSIBLE TO PUMP AROUND PLUNGERS BUT SOME WILL HAVE A STANDING VALVE IN SEATING NIPPLE).

1. MIX 10-15 GAL H2S SCAVENGER WITH 60-100 BBL 2% KCL IN RIG FLAT TANK.
2. PUMP 25 BBLS MIXTURE DOWN TUBING AND REST DOWN CASING. SHUT WELL IN FOR 2 HOURS.
3. IF WELL HAS PRESSURE AFTER 2 HOURS – RETEST CASING AND TUBING FOR H2S.
4. FLUSH TUBING AND CASING PUSHING H2S SCAVENGER INTO FORMATION.
5. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

** As per APC standard operating procedure, APC foreman will verify ALL volumes pumped and record on APC Volume Report Form

RECEIVED: Feb. 22, 2013

API Well Number: 43047405400000

Form 3160-4
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: October 31, 2014

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.: UTU0144867A

1a. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Dry ☐ Other
b. Type of Completion: ☐ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☑ Diff. Resvr.,
Other: RECOMPLETION

6. If Indian, Allottee or Tribe Name:

7. Unit or CA Agreement Name and No.: UTU63047A

2. Name of Operator: KERR MCGEE OIL & GAS ONSHORE, L.P.

8. Lease Name and Well No.: NBU 920-20D

3. Address: PO BOX 173779, DENVER, CO 80217

3a. Phone No. *(include area code)*: 720-929-6000

9. API Well No.: 4304740540

4. Location of Well *(Report location clearly and in accordance with Federal requirements)**

At surface: NWNW 646 FNL 686 FWL S20,T9S,R20E LAT. 40.026320 LONG. 109.697850

10. Field and Pool or Exploratory: NATURAL BUTTES

11. Sec., T., R., M., on Block and Survey or Area: SEC 20, T9S, R20E SLB

At top prod. interval reported below

At total depth

12. County or Parish: UINTAH

13. State: UT

14. Date Spudded	15. Date T.D. Reached	16. Date Completed	17. Elevations (DF, RKB, RT, GL)*
12/12/2011	02/13/2012	☐ D & A ☑ Ready to Prod. 05/16/2013	4828 RKB

18. Total Depth:	19. Plug Back T.D.:	20. Depth Bridge Plug Set:
MD 12061 TVD 12057	MD 12017 TVD 12013	MD 11,450 TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
CBL/CMI/GR/CCL-BHV-ULTRA SLIM SD/DSN/ACTR

22. Was well cored? ☑ No ☐ Yes (Submit analysis)
Was DST run? ☑ No ☐ Yes (Submit report)
Directional Survey? ☑ No ☐ Yes (Submit copy)

23. Casing and Liner Record *(Report all strings set in well)*

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
11.0	8.625 J-55	28.0	0	3024		690		0	
7.875	4.5 I-80	11.6	0	12061		2267		2500	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	10,383							

25. Producing Intervals / 26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WASATCH	6820	8534	6820-8534	0.36	108	OPEN
B) MESAVERDE	8869	10767	8869-10767	0.36	135	OPEN
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, etc.

Depth Interval	Amount and Type of Material
6820-10,767	PUMP 13,328 BBLS SLICK H2O & 323,200 LBS 30/50 OTTAWA SAND
	11 STAGES

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
5/16/13	5/24/13	24	→	0	2243	0			FLOWING

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status
20/64	339	2865	→	0	2243	0		PRODUCING

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status
			→					

*(See instructions and spaces for additional data on page 2)

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28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status

29. Disposition of Gas *(Solid, used for fuel, vented, etc.)*

SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				GREEN RIVER	1828
				BIRD'S NEST	2065
				MAHOGANY	2555
				WASATCH	5306
				MESAVERDE	8839

32. Additional remarks (include plugging procedure):

Find attached the recompletion history and perforation report. Casing in the well is as previously reported on the original Completion Report. New recompletion perforations are: Wasatch 6820-8534 and Mesaverde 8869-10,767 ft.; existing perforations: Mesaverde 11,462-11,828 ft. A CIBP isolating new perforations from old perforations was set at 11,450 ft. with 5 sx cement on top on 1/23/13. Test information is production from the new Wasatch/Mesaverde perforations.

33. Indicate which items have been attached by placing a check in the appropriate boxes:

☐ Electrical/Mechanical Logs (1 full set req'd.) ☐ Geologic Report ☐ DST Report ☐ Directional Survey

☐ Sundry Notice for plugging and cement verification ☐ Core Analysis ☐ Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name *(please print)* TEENA PAULO Title STAFF REGULATORY SPECIALIST

Signature Date 6/11/13

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 3)

RECEIVED: Jun. 11, 2013

US ROCKIES REGION

Operation Summary Report

Well: NBU 920-20D		Spud Date: 1/13/2012	
Project: UTAH-UINTAH	Site: NBU 920-20D		Rig Name No: MILES-GRAY 1/1
Event: RECOMPL/RESEREVEADD	Start Date: 4/22/2013		End Date: 5/16/2013
Active Datum: RKB @4,828.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
5/9/2013	13:00 - 18:30	5.50	SUBSPR	31	I	P		MOVE RIG & EQUIP FROM NBU 921-20N, MIRU, SPOT EQUIP, NDWH, NUBOP, POOH TALLY & STD BACK 350 JTS TBG, SWI, SDFN.
5/10/2013	7:00 - 7:15	0.25	SUBSPR	48		P		HSM-JSA
	7:15 - 15:00	7.75	SUBSPR	52	A	P		NDBOP, NUFV, MIRU CAMERON PRESS TEST FV & CASING TO 7,000 PSI, LOST 97 PSI IN 15 MIN, RDMO CAMERON, MIRU CASED HOLE SOLUTIONS. PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH, SWI, SDFWE.
5/13/2013	7:00 - 7:15	0.25	FRAC	48		P		HSM-JSA

RECEIVED: Jun. 11, 2013

US ROCKIES REGION

Operation Summary Report

Well: NBU 920-20D		Spud Date: 1/13/2012	
Project: UTAH-UINTAH	Site: NBU 920-20D		Rig Name No: MILES-GRAY 1/1
Event: RECOMPL/RESEREVEADD	Start Date: 4/22/2013		End Date: 5/16/2013
Active Datum: RKB @4,828.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 19:00	11.75	FRAC	36		P		PSI TEST FRAC LINES TO 8000 PSI. LOST 170 PSI. GOOD TEST. BLEED OFF PSI. BEG FRACING. FRAC STG 1)WHP 1,113 PSI, BRK 5,814 PSI @ 3.8 BPM. ISIP 3,660 PSI, FG .78 ISIP 3,458 PSI, FG .76, NPI -202 PSI. SWI, XO TO WL. PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM. .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 10,611' P/U PERF AS PER DESIGN. POOH, XO TO FRAC. FRAC STG 2)WHP 593 PSI, BRK 4,745 PSI @ 3.8 BPM. ISIP 3,325 PSI, FG .89 ISIP 3,557 PSI, FG .78, NPI 232 PSI. SWI, XO TO WL. PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM. .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 10,416' P/U PERF AS PER DESIGN. POOH, XO TO FRAC. FRAC STG 3)WHP 769 PSI, BRK 5,471 PSI @ 4.7 BPM. ISIP 3,802 PSI, FG .80 ISIP 3,503 PSI, FG .78, NPI -299 PSI. SWI, XO TO WL. PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM. .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 10,193' P/U PERF AS PER DESIGN. POOH, XO TO FRAC. FRAC STG 4)WHP 1,133 PSI, BRK 3,754 PSI @ 4.0 BPM. ISIP 2,724 PSI, FG .71 ISIP 3,197 PSI, FG .75, NPI 472 PSI. SWI, XO TO WL. PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM. .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 9,861' P/U PERF AS PER DESIGN. POOH, XO TO FRAC. FRAC STG 5)WHP 2,942 PSI, BRK 3,777 PSI @ 4.0 BPM. ISIP 3,017 PSI, FG .75 ISIP 3,419 PSI, FG .79, NPI 402 PSI. SWI, XO TO WL. PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM. .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 9,168' P/U PERF AS PER DESIGN. POOH, XO TO FRAC. FRAC STG 6)WHP 754 PSI, BRK 4,333 PSI @ 3.7 BPM. ISIP 3,051 PSI, FG .77 ISIP 3,157 PSI, FG .79, NPI 106 PSI. SWI, XO TO WL. PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM. .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8,564' P/U PERF AS PER DESIGN. POOH, SWI,SDFN.

US ROCKIES REGION

Operation Summary Report

Well: NBU 920-20D		Spud Date: 1/13/2012
Project: UTAH-UINTAH	Site: NBU 920-20D	Rig Name No: MILES-GRAY 1/1
Event: RECOMPL/RESEREVEADD	Start Date: 4/22/2013	End Date: 5/16/2013
Active Datum: RKB @4,828.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
5/14/2013	7:00 - 7:15	0.25	FRAC	48		P		HSM-JSA
	7:15 - 17:00	9.75	FRAC	36		P		FRAC STG 7)WHP 2,124 PSI, BRK 6,422 PSI @ 4.0 BPM. ISIP 3,618 PSI, FG .87 ISIP 3,135 PSI, FG .83, NPI -483 PSI. SWI, XO TO WL. PERF STG 8)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM. .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8,167' P/U PERF AS PER DESIGN. POOH, XO TO FRAC. FRAC STG 8)WHP 564 PSI, BRK 6,682 PSI @ 4.4 BPM. ISIP 5,875 PSI, FG 1.17 ISIP 3,028 PSI, FG .82, NPI -2847 PSI. SWI, XO TO WL. PERF STG 9)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM. .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7,755' P/U PERF AS PER DESIGN. POOH, XO TO FRAC. FRAC STG 9)WHP 690 PSI, BRK 3,971 PSI @ 3.9 BPM. ISIP 2,871 PSI, FG .81 ISIP 2,828 PSI, FG .81, NPI -43 PSI. SWI, XO TO WL. PERF STG 10)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM. .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7,394' P/U PERF AS PER DESIGN. POOH, XO TO FRAC. FRAC STG 10)WHP 331 PSI, BRK 6,350 PSI @ 4.0 BPM. ISIP 2,625 PSI, FG .80 ISIP 2,600 PSI, FG .80, NPI -25 PSI. SWI, XO TO WL. PERF STG 11)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM. .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 6,998' P/U PERF AS PER DESIGN. POOH, XO TO FRAC. FRAC STG 11)WHP 300 PSI, BRK 6,250 PSI @ 4.1 BPM. ISIP 1,625 PSI, FG .67 ISIP 2,355 PSI, FG .78, NPI 733 PSI. SWI, XO TO WL. PU 4 1/2 8K HAL CBP RIH SET KILL PLUG @ 6,770, RDMO FRAC EQUIP & WIRELINE. TOTAL SAND-323,200 LBS TOTAL CLN FLUID- 13,328 BBLS NDFV, NUBOP, RU FLOOR & TBG EQUIP, SWI, SDFN.
5/15/2013	7:00 - 7:15	0.25	DRLOUT	48		P		HSM-JSA

US ROCKIES REGION

Operation Summary Report

Well: NBU 920-20D		Spud Date: 1/13/2012	
Project: UTAH-UINTAH	Site: NBU 920-20D		Rig Name No: MILES-GRAY 1/1
Event: RECOMPL/RESEREVEADD	Start Date: 4/22/2013		End Date: 5/16/2013
Active Datum: RKB @4,828.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 16:00	8.75	DRLOUT	44	C	P		RIH W/ 100 JTS TBG, POOH LD 60 JTS TBG, RIH W/ 175 JTS TAG FILL @ 6,760', BRK CIRC PRESS TEST BOP TO 3,000 PSI. C/O 10' SAND TAG PLUG #1 @ 6,770', DRL HAL 8K CBP IN 16 MIN, 1,300 PSI INC, FCP 200 PSI, RIH TAG FILL @ 6,978'. C/O 20' SAND TAG PLUG #2 @ 6,998', DRL HAL 8K CBP IN 12 MIN, 800 PSI INC, FCP 250 PSI, RIH TAG FILL @ 7,364'. C/O 30' SAND TAG PLUG #3 @ 7,394', DRL HAL 8K CBP IN 8 MIN, 700 PSI INC, FCP 250 PSI, RIH TAG FILL @ 7,720'. C/O 35' SAND TAG PLUG #4 @ 7,755', DRL HAL 8K CBP IN 7 MIN, 500 PSI INC, FCP 250 PSI, CIRC WELL CLN, SWI, SDFN.
5/16/2013	7:00 - 7:15	0.25	DRLOUT	48		P		HSM-JSA

US ROCKIES REGION

Operation Summary Report

Well: NBU 920-20D		Spud Date: 1/13/2012	
Project: UTAH-UINTAH	Site: NBU 920-20D		Rig Name No: MILES-GRAY 1/1
Event: RECOMPL/RESEREVEADD	Start Date: 4/22/2013		End Date: 5/16/2013
Active Datum: RKB @4,828.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 15:00	7.75	DRLOUT	44	C	P		SICP 1,900 PSI, OPEN WELL, RIH TAG FILL @ 8,122'. C/O 45' SAND TAG PLUG #5 @ 8,167', DRL HAL 8K CBP IN 7 MIN, 300 PSI INC, FCP 250 PSI, RIH TAG FILL @ 8,529'. C/O 35' SAND TAG PLUG #6 @ 8,564', DRL HAL 8K CBP IN 6 MIN, 800 PSI INC, FCP 400 PSI, RIH TAG FILL @ 9,138'. C/O 30' SAND TAG PLUG #7 @ 9,168', DRL HAL 8K CBP IN 5 MIN, 600 PSI INC, FCP 500 PSI, RIH TAG FILL @ 9,826'. C/O 35' SAND TAG PLUG #8 @ 9,861', DRL HAL 8K CBP IN 6 MIN, 900 PSI INC, FCP 6000 PSI, RIH TAG FILL @ 10,163'. C/O 30' SAND TAG PLUG #9 @ 10,193', DRL HAL 8K CBP IN 8 MIN, 300 PSI INC, FCP 650 PSI, RIH TAG FILL @ 10,386'. C/O 30' SAND TAG PLUG #10 @ 10,146', DRL HAL 8K CBP IN 8 MIN, 200 PSI INC, FCP 650 PSI, RIH TAG FILL @ 10,581'. C/O 30' SAND TAG PLUG #11 @ 10,611', DRL HAL 8K CBP IN 10 MIN, 500 PSI INC, FCP 750 PSI. RIH TO 10,914' (147' BLW BTM PERF), NO TAG, CIRC CLEAN, RD PWR SWVL, POOH LD 17 JTS TBG, LAND TBG W/ 327 JTS 2 3/8" L-80 EOT @ 10,383.05', RD FLOOR & TBG EQUIP, NDBOP, NUWH, DROP BALL POBS @ ???, PUMPED 45 BBLS NO PRESS INC, LET BIT FALL 20 MIN TURN OVER TO FBC, RDMO, SDFN. KB-18' HANGER-.83' 327 JTS 2 3/8" L-80-10,362.02' POBS W/ XN SN-2.20' EOT @ 10,383.05' TLTR=13,688 BBLS TLR=3,550 BBLS TLLTR=10,138 BBLS
	15:00 - 15:00	0.00	DRLOUT	50				WELL TURNED TO SALES @ 1430 HR ON 5/16/2013. 600 MCFD, 1560 BWPD, FCP 2400#, FTP 2300#, 18/64" CK.

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 920-20D	Wellbore No.	OH
Well Name	NBU 920-20D	Wellbore Name	NBU 920-20D
Report No.	1	Report Date	5/13/2013
Project	UTAH-UINTAH	Site	NBU 920-20D
Rig Name/No.	MILES-GRAY 1/1	Event	RECOMPL/RESEREVEADD
Start Date	4/22/2013	End Date	5/16/2013
Spud Date	1/13/2012	Active Datum	RKB @4,828.00usft (above Mean Sea Level)
UWI	NW/NW/0/9/S/20/E/20/0/0/26/PM/N/646/W/0/686/0/0		

1.3 General

Contractor		Job Method		Supervisor	
Perforated Assembly		Conveyed Method			

1.4 Initial Conditions

Fluid Type		Fluid Density	
Surface Press		Estimate Res Press	
TVD Fluid Top		Fluid Head	
Hydrostatic Press		Press Difference	
Balance Cond	NEUTRAL		

1.5 Summary

Gross Interval	6,820.0 (usft)-10,767.0 (us	Start Date/Time	5/13/2013 12:00AM
No. of Intervals	72	End Date/Time	5/13/2013 12:00AM
Total Shots	243	Net Perforation Interval	81.00 (usft)
Avg Shot Density	3.00 (shot/ft)	Final Surface Pressure	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
5/13/2013 12:00AM	WASATCH/			6,820.0	6,821.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
5/13/2013 12:00AM	WASATCH/			6,890.0	6,891.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			6,920.0	6,921.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			6,944.0	6,946.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			6,966.0	6,968.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,164.0	7,165.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,300.0	7,302.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,344.0	7,346.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,362.0	7,364.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,466.0	7,467.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,526.0	7,527.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,554.0	7,555.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,632.0	7,633.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,646.0	7,647.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,660.0	7,661.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,724.0	7,725.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,850.0	7,851.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,923.0	7,924.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,963.0	7,964.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			7,994.0	7,995.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			8,013.0	8,014.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			8,094.0	8,095.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
5/13/2013 12:00AM	WASATCH/			8,110.0	8,111.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			8,136.0	8,137.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			8,214.0	8,215.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			8,283.0	8,284.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			8,452.0	8,454.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	WASATCH/			8,531.0	8,534.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			8,869.0	8,870.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			8,892.0	8,893.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			8,997.0	8,998.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,042.0	9,043.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,073.0	9,074.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,091.0	9,092.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,120.0	9,121.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,137.0	9,138.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,555.0	9,556.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,599.0	9,600.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,610.0	9,611.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,622.0	9,623.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,674.0	9,675.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,762.0	9,763.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,807.0	9,808.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
5/13/2013 12:00AM	MESAVERDE/			9,830.0	9,831.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,872.0	9,873.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,934.0	9,935.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			9,997.0	9,998.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,075.0	10,076.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,105.0	10,106.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,139.0	10,140.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,162.0	10,163.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,215.0	10,216.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,232.0	10,233.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,249.0	10,250.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,300.0	10,301.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,321.0	10,322.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,333.0	10,334.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,376.0	10,377.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,396.0	10,397.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,426.0	10,427.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,456.0	10,457.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,500.0	10,501.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,526.0	10,527.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,542.0	10,543.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
5/13/2013 12:00AM	MESAVERDE/			10,563.0	10,564.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,580.0	10,581.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,633.0	10,634.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,684.0	10,685.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,710.0	10,711.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,726.0	10,727.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,743.0	10,744.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/13/2013 12:00AM	MESAVERDE/			10,765.0	10,767.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

3 Plots

3.1 Wellbore Schematic